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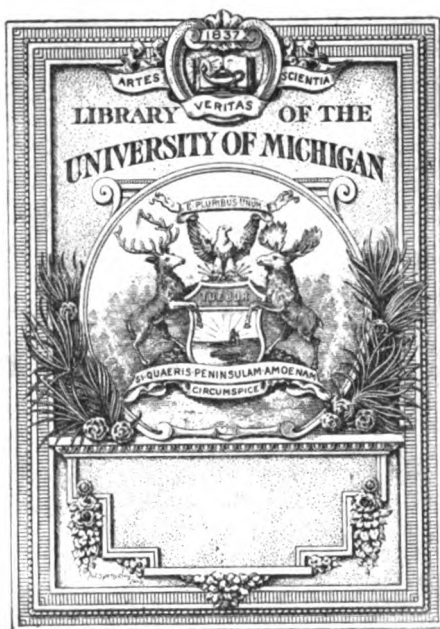
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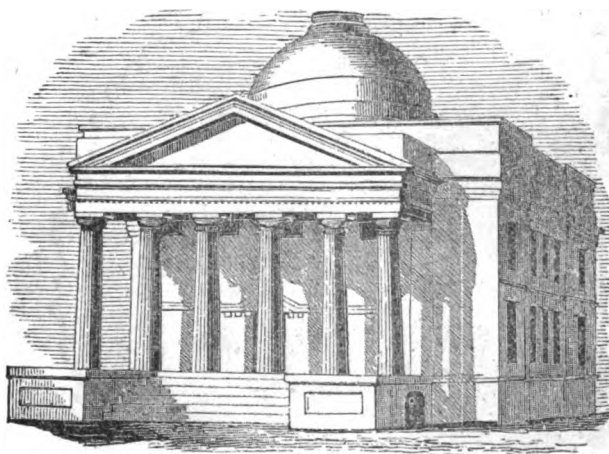
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SOUTHERN
MEDICAL AND SURGICAL
JOURNAL.

EDITED BY
PAUL F. EVE, M. D., and I. P. GARVIN, M. D.



Medical College of Georgia.

"Je prends le bien où je le trouve."

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INDEX.

Age of puberty	Page 41
Albumen as an antidote, caution in giving	155
Aloes, its action and uses	251
Amenorrhœa, treatment of	604
American Journal of Medical Sciences	23
Amputation of limbs	632
Amputation of penis	601
Anasarca, causes of	90
Antidotes of Corrosive Sublimate, &c.	154
Antigastralgie pills	600
Ascites	467
Ashwell, diseases of females	274
Ataxic Pneumonia with delirium	394
Auscultation, essay on	68
Bebeerine, medical properties of	347
Biett's formulary for skin diseases	155
Bile, test for	218-603
Bile, secretion and properties of	536
Bismuth, subnitrate in gastric affections	353
Bladder, difference of size in male and female	664
Blisters in acute inflammatory diseases	83
" in children	422
" in acute diseases of the brain	669
Brigham on mental cultivation, &c.	274
Bronchocele encysted	286
Buffy coat of the blood	693
Bulletin Général de Thérapeutique	202
Burn, extensive	226
Burns, treatment of	601
Cachexia Africana	126
Cachexiæ, antagonism of	729
Calomel	79
Campbell, Dr. H. F. on Gonorrhœa	15
" " " case of tubercular development	317
" " " abuse of Diuretics	360
Camphor, a preservative of ergot	95
" to blisters	603
Caoutchouc in toothache	410
Case of sharp pointed body in intestine	344
Cases Surgical, by Dr. Mercier	346

Case of Twins.....	Page 478
Cases, by Dr. W. H. Robert.....	502
Castor Oil.....	222
Castration, case of.....	666
Caustics, different sorts.....	412
Cautery actual in gangrene of the mouth.....	404
Chronic rheumatism and neuralgia.....	151
Cimicifuga in nervous diseases.....	569
Climata, diseases, &c., of Middle Florida.....	526
Cochineal in whooping cough.....	600
Cæcum, diseases of.....	502
Conium Maculatum, effects of.....	598
Contributions to Therapeutics.....	141
Convulsions, pathology and treatment of.....	49
Convulsions, source of.....	663
Copaiba pills.....	286
" with purgatives in gonorrhœa.....	475
Cornea, ulceration of.....	157
Cornealini, in chlorosis.....	404
Cooper's first lines.....	272
Corrosive sublimate in Epilepsy.....	403
Cough and pleurodynia from spinal irritation.....	229
Creosote in case of vomiting.....	280
Croton oil in Dropsy.....	280
" " for Nævi.....	157
" " plaster.....	222
Cumming, Dr. W. H. letter from China.....	47
" " " " on Auscultation.....	68
Cunningham, Dr. S. B. Case of Monstrosity.....	79
Death of Breschet.....	605
Dental Surgery, principles and practice of.....	535
Diabetes, treatment of.....	279
Diagnosis, cause of error in.....	346
Digestion, chemical phenomena of.....	728
Digitalis in diseases of the heart.....	405
Diuretics, abuse of.....	360
Dropsy, chronic.....	600
Dublin Journal.....	193
Dugas, Dr. L. A. on Convulsions.....	49
" " " " case of extirpation of Mamma.....	122
" " " " remarks on lecture on Mesmerism.....	236
" " " " case of extirpation of the Tumor.....	508
Dysmenorrhœa, treatment of.....	671
Ears, discharge from.....	343
Emetics in Bronchitis.....	543
Epidemic Erysipelas.....	281-718
Epilepsy cured by blisters.....	150
Episioraphy, cases of.....	112

Erysipelas, epidemic in Parisian hospitals	Page 403
Escape of ova, independent of fecundation	38
Eve, Dr. P. F. on bilateral operation of Lithotomy	19
" " " Lecture on Mesmerism	167
" " " case of Hydrocele	367
" " " case of Tetanus	625
" " " on Tertiary Symptoms of Syphilis	673
Eve, Dr. Joseph A. on Secale Cornutum	289
" " " letter to Dr. Smith	574
Evolution and Delivery, with presentation of shoulder, &c.	479
Excision of the urethra in a woman	602
Extirpation of Mamma	122
" of superior cervical ganglion, &c.	221
" of schirrus tumor	508
" of lachrymal gland	159
Extra-uterine pregnancy	573
Fisk fund prize questions,	96
Ford, Dr. L. D. on Intermittent fever	3-488
Foreign bodies, extraction of from Œsophagus	137
Formulæ for alkaline medication	669
Forry, Dr. death of	47
Galvanism	220
Galvanism in uterine hemorrhage	707
Gangrene, dry, case of	691
Gardner, Dr. J. M. on Jasminum Revolutum	447
Garvin, Dr. I. P. on Sub-nitrate of Bismuth	353
Gazette Médicale de Paris	202
Generation, mysteries of	339
Geophagy	417
Gonorrhœa, treatment of	15
Gordon, Dr. J. M. case of Volvulus	444
Graduates of Yale College	160
Groce, Dr. B. W. case of Lithotomy	246
Gums, scarification of, during dentition	277
Harden, Dr. J. M. B. notice of Holdat's Memoir	161
" " " case of Procidentia Uteri	248
" " " soil, climate, &c. of Liberty county	545
Heart, diseases of	328-370
Hemicrania and Tic Douloureux, treatment of	343
Hepatitis and Hepatalgia, diagnosis of	542
Hernia, strangulated, operation for	358
" statistics of	477
Hogs lard in obstructions of the bowels	313
Hooping Cough	213-597
Hydatids, uterine, case of	250
Hydrocele, treated with ioduretted injections	92
" case of	367
Hysteria, local	260

Immoveable bandages of starched paper.....	Page 285
Indian Hemp, effects of.....	216
Infantile gastric fever.....	733
Inflammation of synovial membrane of knee joint.....	477
Inhalation of oxygen gas, an antidote for carbonic acid.....	348
Instruction of Midwives in Paris.....	415
Intermittent fever.....	3-481
Intermittence of intermittent fever.....	43
Inverted toe nail.....	259
Iodide of Potassium in Asthma.....	151
" " " in primary Syphilis.....	539
Itch, treatment of.....	44
Jasminum Revolutum in Syphilis.....	447
Jaundice	410
Journal des Connaissances Médico-Chirurgicale.....	202
Kilpatrick, Dr. A. scraps from case book.....	306
Lake, Dr. John, cases of Episoriaphy.....	119
Le Conte, Dr. John, on Geophagy.....	417
Letter from Dr. John McLester.....	414
Levert, Dr. H. S. on Opium in Abortion.....	225
Liquor Potasse.....	159
Lithontriptic action of Uva Ursi.....	671
Lithotriety	284
Lithotomy, bilateral operation of.....	19
" cases of.....	116
" in the female, case of.....	246
Little, Dr. R. E. on Syphilitic ulcers.....	618
Lumbar abscess.....	505
Lupus, treatment of.....	282
Malaria	45
Malformation of the heart.....	275
Malignant tumor, case of.....	684
Mammary abscess treated by the breast pump.....	476
Mayes, Dr. J. A. on Hogs lard in obstructed bowels.....	313
Means, Dr. Alex. on Calomel.....	79
Medical Memoranda.....	219
" College of Georgia, annual commencement.....	223
" " " State of South Carolina.....	224
" Statistics of France.....	415
" Society for East Tennessee.....	480
Medicinal Substances, passage through the economy.....	218
" " efficient modes of preparing.....	731
Meigs' Columbat De L'Isère.....	274
Mesmerism.....	167
" remarks on a Lecture on.....	236
" true and false.....	544
Miller's principles of Surgery.....	373
Monstrosity, case of.....	120

Negro population, diseases of.....	Page 34
Nervous action re-established after autoplasmic operations.....	476
Nervous Cephalalgia	600
Neuralgia	407
New instrument, by Dr. P. F. Eve.....	605
New hæmostatic means.....	668
New Medical Journals.....	604
New York Journal of Medicine.....	25-96
Nitrate of Silver in chronic diarrhoea.....	216
Nitric Acid in Purpura Hemorrhagica.....	471
Obituary of Prof. Sewell.....	352
Observations on soil, climate, &c. of Liberty county.....	545
Ointments, preparations of	286
Open foramen ovale	38
Operation for defect of Rectum.....	668
Opium in large doses, in abortion.....	225
" in fevers, inflammatory diseases, &c.....	659
Ovariectomy.....	92
Ox-gall in Constipation.....	733
Pains in the loins.....	152
Paracentesis thoracis in acute pleurisy.....	88
Pathology and Therapeutics, essays on, by Prof. S. H. Dickson.....	448
Pendleton, Dr. E. S. case of Lumbar Abscess.....	505
Pennsylvania University.....	352
Period at which the foramen ovale is obliterated.....	38
Periodic discharge of ova.....	402
Periodicity, febrile, influenced by Quinine.....	410
Pillulæ Ferri Iodine.....	96
Placenta prævia	348
Poison by Tartaric Acid	670
Pregnancy, term of exceeded.....	479
Premature Delivery.....	160
Preparations of Mercury and Iodine.....	266
Presentation of arm and shoulder.....	479
Process of secretion.....	37
Procidencia Uteri during labor	248
" " cured by excision, &c.....	310
Punctured wound, case of.....	380
Quinine, Sulphate, in enlarged spleen.....	285
" " in acute Rheumatism.....	538
" " in diseases of the South.....	593
" " employed endermically, not absorbed... ..	734
Ramsbotham's Process of Parturition.....	728
Reproduction of a portion of the lower jaw.....	667
Reunion of divided nerves.....	667
Rhatany in chronic catarrhal ophthalmia.....	96
Robertson, Dr. J. J. on Cough and Pleurodynia.....	229
Robert, Dr. W. H. Cases.....	502

Secale Cornutum.....	Page 289-603
Smith, Dr. G. G. Case of uterine hydatids.....	150
Spasmodic Stricture of the urethra.....	414
Spinal Marrow, division of.....	593
Spleen and its functions.....	338
Stevens, Dr. J. P. Case of Tetanus.....	609
Strictures of the urethra.....	345
Suicides in France.....	604
Surgical operations in Cancerous diseases.....	91
" " dangers of.....	284
" anecdote.....	672
Syphilis treated with Tartar Emetic.....	285
" treated with Iodide of Potassium.....	390
Syphilitic ulcers.....	618
Syphilis, treatment of tertiary symptoms.....	673
" case of.....	686
Tables of Mortality.....	585
Turpentine, use of.....	217
Tetanus, case of.....	609
" traumatic, treatment of.....	625
" treatment of.....	650
Therapeutics applied to chronic diseases.....	30-77
Throat and Larynx, diseases of.....	216
Thymus gland, uses of.....	221
Tracheotomy in Œdema of the throat.....	411
Transylvania University.....	351
Tubercles, conclusions concerning.....	596
Tubercular development in an infant.....	317
" thickening of the lip.....	414
Tufts, Dr. J. B. Case of secondary syphilis.....	686
Turning.....	559
Typhus, treatment of.....	470
Ulcers of the Cornea, treatment of.....	602
Urinary deposits.....	642
Vaccination, Report on.....	734
Vaccine.....	276
Valerianate of Quinine.....	473
Velpeau's Midwifery.....	728
Venous pulse.....	399
Vesicatories in Sciatic neuralgia.....	387
Volvulus and strangulation of the intestines.....	444
West, Dr. Charles. Case of Hernia.....	358
Westmoreland, Dr. J. G. Case of dry Gangrene.....	691
Wildman, Dr. P. H. Cases of Lithotomy.....	166
Wooten, Dr. H. V. Case of Procidencia Uteri.....	310
" " " " on Cimicifuga.....	569
" " G. H. Case of Malignant tumor.....	684

SOUTHERN MEDICAL AND SURGICAL JOURNAL.

Vol. I.]

NEW SERIES.—JANUARY, 1845.

[No. 1.

INTRODUCTION.

THE want of some convenient repository for the results of the observation and experience of Southern Physicians—some medium through which they can communicate with each other, and with the profession at large, has long been felt and deplored. In all the broad region occupied by the Southern and South-western states, there exists but one periodical devoted to the Medical Sciences, and that of recent origin, though in this section are to be found hundreds of intelligent and experienced practitioners, who are thoroughly conversant with the diseases peculiar to it, and with all those modifications which climate, physical constitution, and other causes produce in those maladies which are common to our whole country. It is true that there are already established in the Northern cities several Medical Journals which are conducted with distinguished ability. But these cannot supply our peculiar wants—Of necessity, a large portion of the correspondents of these periodicals reside where many of our most common and serious diseases are but little known—Moreover the field of labor of the Southern physician is so distant, that he does not feel that incitement to prepare the results of his observation for the public eye, which he would experience if there were published in his vicinity, a Journal in which his competitors and his friends were earning distinction for themselves and extending the boundaries of the Science. From the want of such facilities for communication, a vast amount of valuable knowledge is lost to the profession, and its honor and usefulness seriously impaired.

In view of these, and other cogent reasons, the Faculty of the Medical College of Georgia began the publication of the Southern Medical and Surgical Journal in the year 1836, under the editorial management of the late Prof. ANTONY. The work was continued with constantly increasing usefulness and success, until the lamented death of the Editor led to its suspension at the close of the third volume. Since that time, they have received from various quarters urgent appeals to revive the Journal, and in accordance with these requests several attempts have been made to re-establish it, heretofore however, without success.

INTRODUCTION.

But arrangements have now been made which justify the revival of the work, and render certain its future continuance.

The Journal has been placed under the editorial management of two members of the Faculty. They would distrust their own ability to carry on so laborious, and responsible an undertaking, but they are led to make the effort by the promise of the valuable aid of their colleagues, and of other distinguished members of the profession in this and the adjoining States. They have entire confidence in the ability of Southern physicians, to furnish matter which will do honor to themselves, and prove highly useful to the profession. We therefore cordially solicit them to furnish us with their communications, not only upon medical subjects, but also upon any of the collateral sciences.

It is proposed to devote a portion of the Journal to Reviews of new works, and to such Extracts from these, and from other periodicals, as may be useful and interesting. Another part of the Journal will be appropriated to a general Summary of the improvements and discoveries in medicine, which are being made throughout the world. The facilities of the Editors for this part of their task are ample, as they are now regularly receiving all of the most valuable European and American Medical Journals.

The first number of the new series of the Southern Medical and Surgical Journal will be sent to the former subscribers to the work, and also to many other professional gentlemen, in the confident expectation that they will aid the undertaking with their patronage. No selfish feeling prompts this solicitation—for no pecuniary benefit is expected to accrue, unless it should be to the publisher. An anxious desire to do something to advance the usefulness and respectability of Southern medicine, prompts the effort. The harvest is great, the laborers are few, and the Editors enter upon it, trusting that with the blessing of God, and the aid of other professional brethren, they may be in some degree instrumental in the improvement of a Science whose sole, unselfish aim, is to benefit the human race.

The Journal will be issued punctually on the first of every month—and will be forwarded to subscribers by mail, unless some other mode of delivery is specified.

■ Letters containining remittances should be directed (free of postage) to the publisher, P. C. GUIEU.

Communications intended for publication, must be accompanied by the name of the writer, and should be addressed to the Editors.

Augusta, January, 1845.

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Pathology of Intermittent Fever—BY LEWIS D. FORD, M. D., *Professor of the Institutes and Practice of Medicine, in the Medical College of Georgia.*

The writer offers no apology for an article on the common and trite subject of Intermittent Fever; for after all that has been written upon it and all that is known of it, it still remains a subject of the deepest interest, and one worthy the most thorough study. The philosophy of that physician is not to be envied, who rests satisfied with his knowledge of Intermittent fever, when he has learned to distinguish it from all other diseases, and to treat it after the commonly received rules. That its pathology is still unknown, continues to stimulate the inquiries of those, whose ultimate object of research, in every disease, is to ascertain its primary location and the very nature of the physical changes in which it consists. The very act of tracing out the relations of its open phenomena with the hidden parts of the organization is interesting, if only for the gratification of a scientific curiosity—“*Felix, qui potuit rerum cognoscere causas.*”

But the study of the intimate nature of a disease, which is well marked by external symptoms, and which has a specific and well known treatment, has a higher aim than this; for however well known the physiognomy of Intermittent fever in its simple forms, and however certain its cure, yet, in its complicated forms it becomes most formidable and fatal; and he who understands best the pathology of the simpler form, will be best prepared to trace it in all its complications, and to vary his treatment according to its ever-changing accidents. Again, if the opinion entertained by Dr. CULLEN be true, that this is the fundamental or model type of all fevers—that even the most continued fever consists of a repetition of paroxysms, then the true mode of studying all fevers must be to begin with the simple form; and he who passes by this form, without getting a definite knowledge of its intimate nature, will scarcely be able to comprehend fever in its more complex forms. We have no intention now, to examine the question whether there really does exist any form of

fever, which is truly continued, but only assert the fact, the result of our own observation of many years, that the fevers of this climate, do almost invariably, in their commencement and through the greater part of their course, present a decided paroxysmal character; and that it is not until after the occurrence of those fixed, structural changes, which inflammation produces, that they lose this character. To the physician of the Southern States then, whose great business is the treatment of periodical fever of various forms, an effort to illustrate the nature of simple Intermittent fever, may not be unacceptable.

It is unnecessary to enter into a detail of the symptoms of Intermittent fever, these being so familiar to all. The problem with which the writer proposes to occupy himself is this: the symptoms of Intermittent fever being given, to determine the organic alterations upon which these depend—in other words, the diseased *acts* being given, to ascertain the diseased *state*; for, as already intimated, he fully recognizes that sound principle of medical philosophy, that the ultimate object in the study of disease is the knowledge of the *diseased state*—the physical state of the organ or organs suffering.

If organic medicine had done nothing more than establish this cardinal principle, it had rendered an inestimable benefit to our Science; for although it must be candidly declared, that this high degree of knowledge, even in the most palpable diseases, is very imperfect, yet its pursuit is not chimerical; in proposing to gain it, we are not in search of the unattainable. This great principle of organic medicine teaches the physician to study his Science with the same inductive method, that has so beautifully illustrated the physical Sciences, in the assured hope, that new modes of investigation shall make definite, that knowledge which is now so imperfect. It is a great polar star, which will keep him in the *right way*, and that which he does not reach himself, after-generations, beginning where he left off, shall not fail to discover. Even at the present day, this principle steadily kept in view will lead to the coarser, but by no means unimportant knowledge of the organ affected, in any given disease.

The physical changes in the organization, upon which simple intermittent fever depends, have not as yet been satisfactorily determined; because, in the few cases, in which after a prolonged course, it proves fatal, it can scarcely admit a doubt, that the appearances of inflammation in the stomach and bowels, and enlargement of the

liver and spleen, are the consequences rather than the causes of the disease. These morbid states are by no means, uniformly discovered after death or manifested during the disease; these enlargements, often do not exist nor any evidence of these inflammations; and moreover, nothing is more common than their continuance long after the fever has disappeared. Besides this uncertainty, we believe another reason why these physical changes have not been discovered is, that they have not been generally sought for in the right direction nor with sufficient patience and minuteness. And although autopsic examinations of cases of *complicated* malignant Intermittents shew physical changes to have taken place in the central organs of the nervous system, very uniformly, yet the inference is not allowable, that it is upon this kind of organic disease, that *simple* Intermittent fever depends. So that *simple* Intermittent never proving fatal, pathological anatomy can furnish us no aid in determining its organic lesions; and we are left to reason out its pathology, under the guidance of general principles.

In considering the various functions of the body, during a paroxysm of fever, we find almost every one of them disordered—functional disease is absolutely omnipresent; and as we can conceive of no functional derangement independent of organic changes, we infer that organic disease is as universally present. Upon this state of universal disease of the organs, we are obliged to conclude, that they did not contain within themselves an independent cause of irritation, acting simultaneously to produce their disordered action—this were an absurdity. We are compelled to regard this universal disorder as consequent upon disturbance in the action of those systems universally distributed throughout the body, and therefore universal in their influence upon its organs—namely, the circulating and nervous systems. Each of these has its great central organ, whose varying degrees and kinds of action are quickly manifested by corresponding changes throughout the entire economy. And again, when, in a paroxysm, we observe the whole circulating system disordered in its action, this becoming either increased or diminished or irregular, we are equally compelled to attribute this disturbance, not to irritation or disease developed simultaneously, in the various parts of this system, but to the increased, diminished or irregular action of its central impelling muscle—the heart. This is true of every part of the arterial system depending directly for its action, upon that of the heart—and to a considerable degree of the capillary system also; for

although it possesses an independent action of its own, still that is undoubtedly modified to some extent by that of the heart, as illustrated by the opposite states of the capillary system in the extremes of high and low general action. Seeing then, that a vast number of the phenomena of a paroxysm may be dependent upon disordered action of the heart, it becomes an important enquiry—how, in fever, is the disordered action of the heart produced? To aid in the solution of this question, let us first determine the various modes in which an organ may be disordered in its functions. Inflammation present in an organ does most signally disorder its actions; and this is a state, discoverable by palpable characteristic changes—structural changes in its organization. Besides this state of inflammation, the functions of an organ may be deranged by the state and quality of the blood circulating within it; thus too much blood or too little, or blood of a depraved quality produces deranged action. Again, besides these two, there is a third cause of disordered function of an organ—viz: the influence of other diseased organs upon it, through the medium of the nervous system—sympathetically disordered.

Does this disordered action of the heart, manifested during the paroxysm of fever, depend upon inflammation?—Is the primary seat of fever in the heart itself? This question may safely be decided upon the testimony of morbid anatomy alone: which does not discover the evidences of inflammation of the heart, or any of its tissues, even in cases of fatal malignant Intermittents. Further, its inflammation is characterized by well marked symptoms, not present during the paroxysm;—and, again, this disordered action of the heart is secondary to other affections previously developed. As to the second source of disorder—too much or too little or depraved blood; although this class of causes must necessarily exert a powerful influence over its action, at various stages of the paroxysm, yet the diminution of the natural quantity, or its increase, belongs to a secondary series of phenomena—the effect of pathological states previously existing; and this varying quantity of blood in the heart is probably dependent upon the peculiar action of the heart itself. We are led therefore to conclude that the action of the heart is disturbed by the influence of other organs antecedently diseased.

In determining which of the organs exerts this influence over the heart's action, we remark, that the inflammatory state of each and every tissue in the body and of each organ, has this power of disturbing the action of the heart, and thus of inducing fever. We have

ample proof of this in the great number of the Phlegmasiæ—such as, Gastritis, Enteritis, Pleuritis, Pneumonia, Phrenitis, &c. But this pathological principle will not enable us to illustrate the nature of Intermittent fever—it cannot be called a phlegmasia of any of the organs; because these local inflammations consist in radical alterations of the tissues, which cannot be promptly changed, and which therefore manifest themselves by continuous symptoms; accordingly, these fevers of the phlegmasiæ are not marked by intermission—they are nearly continuous.—So that the pathology, which would regard Intermittent fever as a phlegmasia simply, of some of the organs, leaves unexplained its most characteristic feature—its periodicity. Indeed, so far is this opinion from being correct, that on the contrary, the occurrence of positive inflammation in any one of the organs is sure to destroy the periodicity of Intermittent fever.—Moreover, after a paroxysm, the organs all return to their healthy functions, so that the symptoms of the paroxysm must have depended upon some pathological state of the organs less permanent than that of inflammation—a state capable of being cured by the very commotions of the paroxysm.

This, however, only settles the opinion, that Intermittent fever is not a phlegmasia; and the question returns, what are the organs primitively affected? The recollection of the symptoms and the order of their occurrence will suggest, that it must be some part or the whole of the central organs of the nervous system; for among the very first, or premonitory symptoms, are those indicating disorder of their functions; for they are symptoms of disordered sensation, of disorders in the muscular system, and of disorders of the intellect. Before interpreting these symptoms, however, it is proposed to establish the general principle, that a diseased state of the brain and spinal marrow may produce a vast variety of functional derangements in distinct organs; and to specify the various kinds of derangement known to be thus produced. To commence with those affections of the spinal marrow, about which there can be no doubt—affections that are accompanied with and leave behind them, structural disorganization, we take *Myelitis* or inflammation of the spinal marrow. It is sometimes general—at others, confined to particular portions of the spinal chord. When it exists in the cervical region, there is local pain; which, however, is so obscure as not to command, forcibly, the attention of the patient, until after pressure upon the spinous processes; which is generally followed by continuous pain;—the more

urgent symptoms, to which the patient himself refers, are pain in the upper extremities, with spasms of the muscles, numbness of these limbs, permanent rigidity of some of the muscles, followed by paralysis; the respiration is notably injured, becoming laborious and asthmatic; and it is remarkable that death comes by asphyxia, from embarrassment of the respiratory function. When in the dorsal region, besides the local symptoms already mentioned, the most obvious symptoms are those of disordered respiration and especially of disordered functions of the abdominal viscera, cramps of the stomach, cholic, constipation, contraction of the abdominal muscles. When seated in the lumbar region, its characteristic symptoms are manifested in the lower abdominal and pelvic viscera and in the lower extremities—obstinate retention of feces and urine, or incontinence of both, convulsions, rigidity and paralysis of the muscles of the lower extremities. Allusion is here made to acute *Myelitis*, with fever finishing its course in a few days, leaving marks of unequivocal inflammation, which it is needless here to specify. Nor is it necessary to do more than merely refer to the acute diseases of the brain, as exemplifying the principle, that primary disease of the brain or spinal marrow is manifested by symptoms in distinct organs. Physiological experiments upon living animals establish it equally. If a nerve be irritated at its origin in the spinal marrow, this irritation will be manifested by pain and muscular contractions in the parts to which that nerve is distributed; and if this connection between the irritated portion of the marrow and the distant parts be broken, by dividing the trunk of the nerve, these effects do not appear.

But let us look at this principle, more closely, in reference to the common symptom of *pain*. If the finger be pricked by a pin, we feel pain. We are apt, without reflection, and even in the face of our positive knowledge, to conclude that this pain is produced by injury done to the nerves of the part, and to rest in this explanation; but surely the sensation of pain depends essentially upon the action of a particular part of the nervous centre, with which the tissue injured is in connection; for, do but cut off the part injured from communication with the nervous centre, by dividing its nerve, and no pain will be felt, from the severest violence. The *action*, then, of some particular portion of the central nervous organ, is indispensably necessary to the production of this pain; and this action is the result of a peculiar modification of this nervous substance. Now it is fair to infer, that if from any idiopathic affection of this portion of

the nervous centre, the same modification should be produced, the same kind and degree of pain would be felt in the finger, as was produced by the pin. We may safely adopt the same explanation of pain from disease; and yet there is the same stopping short at the part itself, instead of looking to the more far-off source.

In pleurisy, for example, no doubt that if the communication with the nervous centres were cut off, no pain would be felt; and on the other hand, if from any cause, the portion of the nervous centres be similarly modified, the same kind of pain would be felt in the pleura, as is felt when it is inflamed. Now, we are not left to conjecture on this point, for this state of things actually occurs, in that disease, closely resembling pleurisy, in its violent and pungent pain, though unaccompanied by its inflammation, its characteristic effusion or its fever—*pleuralgia*; dependent on spinal irritation, as we believe, both from the fact that it is accompanied with tenderness on pressing some of the spinous processes of the dorsal vertebræ, and that it is promptly relieved by revulsive applications to the spine—relieved as by a charm. We have proof of the dependence of pain in an organ upon the diseased state of the spinal marrow, in the almost instantaneous relief of *false pains* in the uterus, by revulsive applications to the loins;—indeed, so certain is this mode of relief, that the writer has long been in the habit of using a sinapism to the sacrum and loins, as a test of the nature of these pains, instead of a manual examination of the os tincæ.

But irritation in some portion of the spinal marrow not only determines pain in distant parts, but we think it may be shewn to determine those physical alterations in the tissues, in which inflammation itself consists. These physical derangements in inflammation, take place in the capillary system—its beginning is there; suppuration in which it often terminates, is evidently a secretory process carried on by its vessels. If we enquire into the mode in which these vessels perform their action in health—the mechanism of their action—it will aid in determining this question. There are two circumstances indispensably necessary to the production of the actions of these vessels, as of every other vital action—1st. the living organized surface, endowed with the capability of feeling the impression of excitants, and 2nd. the agents to make this impression. Now, without going into the question in physiology, whether the actions of the organs are independent of nervous influence, we remark that this susceptibility of the tissues to impressions is dependent on their

organization, and the nerves are indispensable to this organization—and it is according to our knowledge at the present day, to say that the power of feeling impressions is dependent upon the nervous system. In determining what are the agents and stimulants, which making their impressions upon the susceptible capillaries, excite them to action, the remembrance that their functions—nutrition, absorption, secretion, &c, are *incessant*, never interrupted, not even in sleep, suggests that these stimulants must be *always* in contact with them—that this agent is the *blood* within them: in this we recognize a beautiful provision, inasmuch as the fluid, which is to furnish the materials for the nutrition and secretion of the organs, is itself the stimulus to the actions, which separate these materials. If this be a correct account of the mechanism of the capillary action, then a change in the quality of the stimulus, the sensibility remaining in the natural state, will derange their action; but, a change in their sensibility—an increase of this sensibility, the blood remaining of its natural quantity and quality, will also derange their action. Let us apply these principles to explain how inflammation may be induced by idiopathic disease of some portion of the nervous centre. Let us take the pleura: in its sound state, it is exercising all its capillary functions with regularity; these capillaries, constantly supplied with their stimulus, the blood, by the action of the heart; their susceptibility to this stimulus as constantly kept up, by the incessant action of that portion of the central nervous system, with which it is in communication, by intercurrent nerves. But suppose that this portion of the nervous centre becomes diseased, its healthy action disordered, then this susceptibility of the capillaries must become changed also; and if increased, their ordinary stimulus will excite its capillaries to higher action—the first step in every simple inflammation. The writer would not be understood as affirming, that pleurisy and other inflammations have their beginning in the central nervous system; he is only explaining how a particular modification of some portion of this system *may* determine the first beginnings of inflammation.

It must be acknowledged, that a physiological argument to prove the possibility of the dependence of inflammation upon a diseased state of the nervous centres would be nothing worth, if observation did not discover the fact. Acute Rheumatism, with its local heat, swelling, redness, and excessive pain in the joints may be considered, at the present day, as proved to be dependent on a diseased condition of some portion of the spinal marrow—proved by the evidence of

uniformly co-existing and antecedent disease there, and by the fact of the great success of revulsive applications to the spine. We assert the fact, that absolute mucous gastritis is uniformly attended with spinal tenderness, in some portion of the upper dorsal vertebræ, and that of all the means for relieving this most distressing affection, none can compare, in promptness and efficiency, with leeches, cups, sinapisms, and blisters to the spinal column. Again, we have for many years, recognized the same connection, in acute peritonitis—it exists with great uniformity, even in puerperal peritonitis, and these topical applications to the lower dorsal and lumbar region of the spinal column, we have been accustomed to use as most important auxiliaries, in that affection, which so often taxes all the resources of the physician. The writer regrets that he cannot, here, illustrate these pathological facts, by carefully observed and recorded cases, of which he has an abundance at his command.

There is another pathological state, strictly dependent on original disease in some portion of the spinal marrow—spasm or convulsions of the muscles of organic life, such as the heart, the muscles of respiration, the muscles of the stomach and intestines, &c.; and if these, we are authorized to conclude the muscular tissue of the capillaries also:—thus, upon some diseased state of the spinal marrow are dependent nervous palpitations of the heart, some of the varieties of asthma, hysteria, colic, and cramp of the stomach. The writer could adduce many instances of predisposition to this last mentioned disease entirely destroyed by a seton between the shoulders. The recent records of medicine abound with facts, shewing the dependence of almost every variety of disordered sensation, as also of disordered secretion, upon original disease in the spinal marrow. Thus has it been shewn that acute pain and almost every variety of disordered sensation, throughout the body, spasms of the muscular tissue, and those disordered actions in the capillaries which are manifested in inflammation, and disordered secretions *may* depend on a diseased condition of some parts of the brain or spinal marrow—that is every variety of functional disorder which is observed during a paroxysm of Intermittent fever.

We now proceed to an interpretation of the symptoms, with the aid of these principles—to show that they depend on lesions of the central nervous organs. Consider the premonitory symptoms of a chill; which certainly form a very important part of the disease. These are pain in the back, in the knees and other joints, together

with a feeling of general weariness in the muscular system, prompting the patient to move his muscles, and an unwonted degree of fatigue, upon slight exertion ; so that the patient is tormented between two opposite states, the desire to move the muscles and to keep them at rest. For days, there is a loss of appetite and disordered digestion, with nausea and even vomiting. Pain in the back—On remarking pain in the region of any important organ, we hesitate not to attribute some disease to that organ ; why not in this instance, especially as this symptom is so invariable ! These pains in the joints are without the usual signs of local inflammation ; and those accustomed to treat chronic rheumatism of the joints, by applications to the spinal column, will confidently refer them to the state of the spine.

The healthy sensations of the muscles are well known to depend upon a good condition of those portions of the nervous centres from which they derive their nerves, and of course disease in those portions must disorder them. And when we remember that the muscular tissue is not readily diseased, we have another argument that the disorders already mentioned in their sensations and motions originate in the spinal marrow.

As for the heaviness of the epigastrium, and the uneasiness there, with loss of appetite—they are symptoms clearly referable to spinal irritation, in other cases where they are not attended with fever—in dyspepsia, for example—where repeated blisters to the spine often prove an effectual relief. So much for the precursory symptoms.

The chill itself is marked by irregular action of the whole muscular system ; producing rigors of the limbs, chattering of the teeth ; universal pallidness and constriction of the skin, and suspension of the secretions, that is disordered actions of the capillary system. We do not hesitate to account for these symptoms, with Dr. CULLEN, by saying that they proceed from spasmodic constriction of the capillaries. If now, we consider how closely the muscular and capillary systems depend on the central organs of the nervous system, we shall find in a diseased condition of the latter, a sufficient explanation of all these symptoms ; but as these are manifested in all parts of the body, we must suppose the whole extent of the central organs to be in a pathological state. These general disorders of the capillaries become in their turn, causes which modify the action and condition of all the other organs, particularly of the circulating system, by accumulating the blood unduly in the large vessels, as explained by

Dr. CULLEN, and thus, by exciting strongly, the action of the heart becomes the procuring cause, of the succeeding hot stage.

But there are more positive reasons for assigning the proximate cause of Intermittent fever to some lesion of the nervous centres. The first we shall mention is, the uniformity of the evidence of a diseased state of some portion of the spinal marrow. This evidence we find in the fact, that pressure upon some of the spinous processes of the vertebræ is accompanied with pain. Upon this point the writer begs leave to refer to an article on this subject in the 1st vol. Southern Medical & Surgical Journal, in which this symptom is shewn to have existed, in nearly every case of Intermittent and Remittent fever, occurring under his notice, for one reason. His own subsequent observations, as well as those of others, have satisfied him, that this is one of the most constant of its symptoms. And, again, that this diseased point of the spinal marrow exerts a decided influence in producing the phenomena of fever, we may infer from the prompt relief afforded to many distressing symptoms of the paroxysm, through revulsive applications to the spinal column; in proof of which many of the same cases may be cited. Another good reason is the fact, that Intermittent fever may be cured, by repeatedly cupping over the tender points of the spinal column, without medicine, and even without dieting—a fact which the writer has repeatedly verified.

We may infer the nature of a malady, from the medical treatment, by which it is best combatted. That ordinary treatment, which experience has sanctioned as the best for Intermittent fever, harmonizes with this pathology. This theory enables us to account satisfactorily for the success of Emetics, Cathartics, Narcotics, Stimulants, such as alcoholic tinctures of aromatics, and the great specific quinine. Emetics are revulsives applied to the surface of the stomach, and operate by relieving the nervous centres—Cathartics, in like manner. Alcoholic Stimulants heighten the normal functions of the nervous centres and thus prevent the recurrence of those physical states which constitute the basis of the disease. With regard to the great remedy, quinine, there are good reasons for thinking that its action upon the nervous system is a specific one—such at least is the fair inference, when we see decided doses of it producing blindness, deafness and roaring in the ears; that is, phenomena of disordered sensation; and if so, its power as a febrifuge is best explained by supposing that the causes of fever are lodged in that system where its effects are most strongly produced.

The opinion of many distinguished pathologists, that the mucous membrane of the stomach is the true seat of the disease, and that this affection is inflammation of that membrane, is disproved by the very different effects of the same remedies in Gastritis and Intermittent fever. What physician would administer emetics, or narcotics, or alcoholic tinctures in the former?—all which, yet, have their measure of success in the latter. Quinine, the grand remedy in Intermittent fever, is perfectly inadmissible in simple inflammation of the stomach. It is no answer to these objections to say, that gastritis is modified by being intermittent; for this is not a modification, but an essential and distinctive difference.

This opinion of the primitive location of intermittent in the mucous membrane of the stomach, seems, at first sight, countenanced by the general acknowledgment of the profession, that marsh miasma is the exciting cause of the disease. For if this be the cause, it must be a physical cause borne to the body, by the air, and therefore makes its first impression upon the skin and mucous membranes of the lungs and stomach. And, indeed, this objection has been made to the pathology proposed in this article. But, passing by the very obvious remark, that if this exciting cause must produce disease in the first tissues, to which it is applied, we would find the mucous membrane of the lungs to be the seat of the disease, seeing that this is the most accessible; let us look at some analogies.—Strychnine and Cantharides taken into the stomach, tell, the one upon the spinal marrow, the other on the organs of generations; the latter will exert its specific effects, even when applied to the skin. Alcohol in the stomach affects the brain—Ipecac injected into the veins tells upon the stomach. So, miasma, though applied first to the skin or lungs or stomach, may very well give rise to effects in a remote part of the system—and the specific action of morbid causes strongly persuades us that it does so. That miasma involves the nervous centres, is further shown by the fact, that where it abounds, we find a great variety of *neuralgic* affections, all having the intermittent character, prevailing simultaneously with Intermittent and Remittent fevers.

The writer remembers with great pleasure, that the observation of this fact, first led him to a critical study of the pathology of Intermittent fever. It was a case of neuralgia of the knee, of the regular tertian form, occurring in a boy, whom he had cured of a simple tertian intermittent fever. The patient had suffered three paroxysms of neuralgia; on the day following the last, he was cupped, twice on

the sacrum and loins, and twice on the day of the expected accession, and local applications to the knee as well as medicine, were most studiously avoided; the paroxysm was arrested and returned no more.

In conclusion—if we find gastritis, determining such a number of sympathetic effects that, in the opinion of the physiological school, it is sufficient to account for all the phenomena of fever, how much more may we attribute them to idropathic affections of the spinal marrow, seeing its connection with the organs and tissues is vastly more extensive than that of the stomach, and that the diseased stomach itself can operate only through its medium.

It was the intention of the writer to have noticed some of the most dangerous complications of Intermittent fever, and to have shewn how the pathology herein proposed points to their most successful treatment; but this article has been already extended beyond its proper limits, and he reserves this subject for a future number of this journal. He will feel that he has not multiplied words in vain, if he fixes in the mind, more especially of the young practitioner, a principle, which will guide him to success, in that class of cases, which make up so large a part of his practice.

ARTICLE II.

*The Abortive and Curative Treatment of Gonorrhœa by the Nitrate of Silver, with cases—*By H. F. CAMPBELL, M. D., *Demonstrator in the Medical College of Georgia.*

In the October number of the Medico-Chirurgical Review, for 1843, and also in a late number of the American Journal of the Medical Sciences, is an article on the abortive treatment of Gonorrhœa, by Lunar Caustic. In the two communications, the reporters have applied it differently—Mr. CHILDS recommending its application in substance, while M. DEBENEY prefers it injected in a solution of strength, from viii. to xv. grs. to the ounce of water.

Having in the treatment of Gonorrhœa, used Nitrate of Silver after both these modes of application, my experience goes to corroborate their testimony as to its efficacy under either form, though of the two, I prefer its application by injection.

I have found that the strength of the injection prescribed by M. DEBENEY, is not, generally, sufficient to relieve by the first or second application, and that it was necessary, in most cases, to increase it to from xx. to xxx. grs. to the ounce of water, and I have applied it in even a more concentrated solution. This I find to be a good modification of the two plans, inasmuch as that, while we secure its application minutely to the whole extent of the diseased surface, we, by this increase in the strength of the injection, provide a sufficiency of the agent to produce more effectual cauterization. I have had but one case, as will be hereafter seen, wherein the application has been followed by a high degree of inflammation, and in that one, I have reason to suppose it to have commenced, before this means of treatment had been resorted to. Generally, I have found the patient recovering speedily from both the disease and the effects of the cautery.

Case 1. A carpenter, aged 30 years, general health, good; was exposed to the disease, and on third day experienced pain in urinating, and a continued burning for some time after. He was relieved by one injection of Lunar Caustic, xxx. grs. to the ounce of water.

Case 2. A young man aged 17. The discharge in this case had begun to show itself. Treated by one injection of Lunar Caustic, xl. grs. to the ounce of water: there was a discharge of blood afterwards in small quantity, but in a few days he was entirely well.

Case 3. A recent case wherein the patient complained of tenderness of the chord before treatment. One injection was made of nearly xxx. grs. to the ounce of water. The application was followed by pain in the testicle and orchitis. The patient was from that time treated by another physician; of the result I have not as yet been advised. This is the only case wherein the Nitrate of Silver, applied by myself in this disease, was followed by unpleasant symptoms.

Case 4. A negro man, a taylor, aged 26. A recent attack, relieved by two injections of Lunar Caustic, xv. grs. to the ounce of water.

Case 5. A mulatto boy aged 20 years; of a Strumous Diathesis: first treated by another physician, and afterwards by myself, unsuccessfully, with various balsamic mixtures and astringent injections,

was cured by one injection of the Nitrate of Silver, xxv. grs. to the ounce of water. In this case a whitish membranous eschar was voided while urinating a few days after the application.

Case 6. A negro man aged about 23 years: a boat hand, had had the disease about ten days. One injection was applied of from xx. to xxx. grs. to the ounce of water. The balsamic treatment, before used without making any impression on the disease, was continued: the patient was well in less than a week's time.

Case 7. A white man aged 30, a team driver, a recent case, cured by one injection, xx. grs. to the ounce of water.

Case 8. A male aged 33 years, a recent attack: discharge, abundant, commenced the day before—no pain. I applied one injection of Lunar Caustic, xl. grs. to the ounce of water. That day there was an increase in the discharge and much pain in urinating, with some blood at that time. On the second day, the discharge ceased altogether, though the pain and bloody urine continued for some days. In this case I combined, during their treatment, a few doses of balsamic emulsion each day.

Case 9. A male aged 20 years, treated on the third day after the discharge had commenced with one injection of Lunar Caustic, xxx. grs. to the ounce of water, together with balsamic emulsion. On the fourth day the patient was entirely cured.

Case 10. Prof. P. F. Evm here kindly furnishes me with a case wherein the balsamic and astringent treatment had proved entirely inert, though persevered in for some weeks, till combined with injections of the Nitrate of Silver of from viii. to xv. grs. to the ounce of water.

Of the application of the Nitrate of Silver in substance, I can adduce but three cases; one of which occurred in the practice of Dr. EDWARD A. Evm, near this city—the other two came under my own observation.

Case 11. A young man aged 26 years: sanguine temperament—treated unsuccessfully with balsamic emulsion and injections of sulphate of zinc, and sulph. of morphine. Dr. E. applied the Nitrate of Silver in substance, by paring the end of a cylinder, and introducing it for about a half inch or more, within the orifice of the urethra. This was done repeatedly, and the patient was relieved in a short time after this plan of treatment was adopted.

Case 12. A male aged 30 years, a mechanic: bilious temperament—general health good. In this case the Gonorrhœa was complicated by a stricture, the result of previous disease, at the dis-

tance of about an inch from the orifice of the urethra; it was at a point somewhat beyond this, that the urethritis appeared to obtain, the patient experiencing pain at that place, during manipulation, and the matter confined behind the stricture, on pressure would appear at the orifice. After dilating the stricture by bougies, I freely applied the Nitrate of Silver in substance, by means of a style and canula somewhat similar to those of Mr. CHILDS. The pain was not felt after the burning of the caustic had subsided, the discharge ceased, and in a few days the patient was well.

In the female, I have found the application of the Nitrate of Silver in substance, preferable to the form of injection: it is more practicable, the locality of the inflammation not being invariable. Of this class is the following:—

Case 13. A white woman aged 26 years: general health good, habits regular. Treated for some weeks with the usual balsamic remedies, using at the same time very strong astrigent injections of sulph. cup. and sulph. zinc. aa viii. grs. and sulph. morphine 1 gr. to the ounce of water, applied once a day. Finding this treatment unsuccessful, I applied with a speculum uteri, the Nitrate of Silver, by means of a port-caustic, freely to the orifice of the urethra, mouth of the womb, and interruptedly to the sides of the vagina. The application was made but once; it caused much pain and there started a few drops of blood from the posterior lip of the os tincæ, which seemed very much congested. In this case I continued the balsamic mixture together with the above injection, diluted. The discharge, though undiminished before the cauterization, soon entirely ceased, and she was well on the fourth day.

From the consideration of the thirteen cases given above, together with the well attested experience of Mr. CHILDS and M. DEBENEY, I think we may safely conclude with regard to this mode of treatment: Firstly, that the treatment of Gonorrhœa with Lunar Caustic, as proposed by them, is preferable to any other mode of treatment; Secondly, that the form of injection is preferable, to its application in substance; Thirdly, that in cases not relieved by the injection as prescribed by M. DEBENEY, of strength from viii. to xv. grs. to the ounce of water, it being perfectly safe, it is advisable to increase it, even far beyond that strength. And further, that in those cases, wherein of itself it does not wholly relieve, we should by no means reject it, but continue its use as a very valuable adjunct to any other plan of treatment we can adopt.

ARTICLE III.

The Bilateral Operation of Lithotomy—another successful case: By
PAUL F. EVE, M. D., *Professor of Surgery in the Medical College*
of Georgia.

Since the publication in the April number, of the American Journal of the Medical Sciences, of four cases of the bilateral operation, I have had another opportunity of removing a stone from the bladder, by the use of the double Lithotome cache.

The first and leading article in the last No. of the Journal referred to (Oct. 1844) is, "On the Bilateral Operation of Lithotomy; and on Lithotrity in the Female: By JOHN C. WARREN, M. D., Professor of Anatomy and Operative Surgery, in Harvard University, Boston." In presenting to the profession the four cases successfully operated upon by my friend, Dr. OGIER, of Charleston, and myself, I stated my belief that they were the first, at least in this section of the country, wherein the double Lithotome of Dupuytren, had been employed; and I also ventured to recommend this mode of operating as superior to the one in general practice. It is no small gratification to find this opinion defended by so distinguished a Surgeon as Professor WARREN, of Boston—the very head of the profession in New-England.

Dr. W. states that in the course of 40 years practice, he has been called upon to perform all the operations of Lithotomy in Boston. These amount only to 25 cases, 3 of which alone were natives of that city or its vicinity—of this number 2 died, one from suppuration in the pelvis. This was a patient of bad constitution, with stone adherent to the bladder; in the other case, death occurred the fifth day from general peritonitis, after the patient had indulged in eating heartily. This brief report furnishes two interesting facts—the success of the operation, especially as no selection was made of cases; and secondly, the exemption from urinary calculi in the city of Boston.

In explaining the immunity thus enjoyed by the inhabitants in and about the capital of New-England, Professor WARREN is inclined to attribute it to the circumstance, that there exists no calcareous rocks

or soils near that city—an explanation, which, although it will not be admitted as satisfactory on the other side of the Atlantic, is correct so far as my observation extends in the Southern States of our Union. In a biographical sketch of the professional career of JOSEPH GLOVER, M. D., of Charleston, prepared by Drs. BELLINGER, WHITRIDGE, and PORCHER, for the Medical Society of South Carolina, and published in the American Journal of Medical Sciences, we find the following sentences:—"Calculus diseases are so rare in this locality, that to have cut for stone in the bladder constitutes an era in the professional career of our Surgeons. As late as 1808, only three operations of the kind could be 'distinctly and certainly recollected as having been performed' in Charleston: * * * * * Up to the present time, (Dec. 1840,) continues the Committee, only seven operations for stone in the bladder have been performed upon persons who were natives, or who had been for many years residents of Charleston."

The following extract from a letter of my friend, Dr. KOLLOCK, an estimable physician of several years practice, gives a report on this subject from Savannah :

"In compliance with your request, I have endeavored to obtain for you all the information which we possess on the subject of urinary calculi, and the operation of Lithotomy, in Savannah and its vicinity. I have enquired of our oldest practitioners, in regard to their observations on this point, and all, without an exception, state that they have never met with a single case in their own practice, nor ever heard of one in the practice of any other physician or surgeon who has lived here.

"The advocates of the theory of the influence of miasmata in its production, will find it difficult to maintain their position in this region, and will probably be under the necessity of acknowledging that, if a residence in a calcareous district is not absolutely necessary, and the sine qua non to the production of stone in the bladder, it is a very important link in the chain of morbid causes."

From Norfolk, in Virginia, to New-Orleans, along the whole sea coast, so far as I have been able to obtain information, the occurrence of urinary calculus is quite rare; and it is only as we approach the mountainous regions that we find the number increasing. But two cases, so far as ascertained, have originated in Augusta—one was operated upon in New-York, some years ago; and the other is the one now about to be submitted to the reader's attention. My other cases already reported, were from abroad—that is from the upper calcare-

ous parts of the country. So far, they corroborate the opinion of Dr. W. in relation to the origin of stones in the bladder—that they are rather the product of calcareous waters than of atmospheric vicissitudes.

Professor WARREN says—"The particular object which I have in view, in this communication, is to direct the attention of the profession to the best mode of doing the operation of Lithotomy. I have till recently performed the lateral operation, formerly with the gorget, and latterly with the knife. In the two cases alluded to above, which terminated unfavorably, the gorget was employed. Accident led me, a year or two since, to examine the merits of the bilateral operation more exactly than I had ever done before. In this investigation, I many times dissected the organs concerned in this operation, both before and after having been done on the dead body. The result was so satisfactory, that, in a case particularly adapted for this mode of operating, I ventured to do it on the living body, and found it to be comparatively so easy in the performance, and so successful in the result, that, in the next case which presented itself, I was induced to repeat it. These cases I ask leave to bring before the profession in this country, in order to invite their examination into the merits of this mode of extracting stone from the bladder."

It is right to state that this distinguished Surgeon objects to the Lithotome, and makes the incisions in the Prostate gland, with a straight, short, narrow, probe pointed knife. He also states that the bilateral operation, called Dupuytren's, was originally proposed by the late Professor RIBES, of the School of Medicine in Paris; the former giving it character and stability by his descriptions and engravings. Dr. WARREN concludes by remarking, that, although he should not feel justified in recommending the bilateral operation for general use, from his limited experience with it, yet, from the lights before him and his views on the subject, he feels disposed to employ it in most cases where Lithotomy is required, in preference to the lateral operation.

In the October No. (1842) of the American Journal of Medical Sciences, will be found an article by Dr. JOSIAH C. NOTT, of Mobile, Ala., on the subject of Lithotomy; in which the following paragraph occurs:—"It should be remembered that Dupuytren saved, by the bilateral operation in the foul air of the Hotel Dieu, (the largest Hospital in Paris,) twenty-six patients in succession; a success perhaps, even more astonishing than that of Professor DUNLAP, when all

the circumstances are considered." Doubtless my medical friend in Mobile believed, when he published this article, that his data for the above successful report was reliable ; but since then facts have been revealed, by which it is now ascertained, that the late celebrated Surgeon in chief of the Hotel Dieu, lost, at least, one in every six cases he operated upon for stone. This much is due to truth.

Case. Lewis, a mulatto boy, 3 years old, had been laboring under the symptoms of stone for several months. Having satisfied myself of its presence, by sounding, and with the finger in the rectum, and having prepared the patient for the operation, it was performed on the 8th of June last. The patient being secured in the usual way, the semi-lunar incision was made between the bulb of the urethra and anus, with its convexity to the scrotum, and down to the staff in the membranous portion of the urinary canal, through which it had been previously introduced into the bladder. To the groove of the staff thus exposed, was adapted the beak of a double Lithotome, of a small size, which had just been received from Charriere, of Paris. This instrument was introduced into the bladder, the one in the urethra withdrawn, the Lithotome turned upon its own axis, so that its concavity was towards the rectum, and its blades being expanded it was drawn out in lowering the handle. A gush of urine indicated the opening made in the bladder, through which the finger introduced felt the stone, which was extracted by a small pair of forceps. From some little delay in the seizing the calculus, and the alarm of the patient, the operation lasted twelve minutes.

This little patient, like the others upon whom I had operated for stone by this mode, had a remarkably rapid recovery. The urine in a few hours passed *per urethram*, and all the dressing applied was a small strip of plaster over the wound in the perineum. No catheter was introduced during the treatment. He had a little fever for the first forty-eight hours after the operation. He sat up in bed on the fourth day, and on the eighth was considered well. He did not, however, recover the full tone and control of the bladder for some days afterward. The calculus weighed about 3iss., and was of the mulberry variety.

PART II.—REVIEWS AND EXTRACTS.

ARTICLE IV.

The American Journal of the Medical Sciences—Edited by ISAAC HAYS, M. D., October, 1844.

The present number of this quarterly, although not heavily freighted with such original matter as should be expected in a work of its pretensions, brings us the details of several cases of interest. Its first article is from the pen of the venerable Professor WARREN, of Boston, who has recently become satisfied of the superiority of the Bi-lateral over the lateral operations of Lithotomy. We are happy to find such high authority corroborating an opinion we have long since entertained, and feel surprised that this able surgeon should have been so tardy in testing a method long since adopted by many, and possessing such obvious advantages. We cannot agree with him in the preference he gives to the knife over Dupuytren's Lithotome cache, nor can we perceive any force whatever in his objections to this instrument. It must certainly be by far the safest instrument with which the bladder can be opened, independently of the facility and simplicity it imparts to the operation.

The article contributed by JOHN WATSON, M. D., of New-York, on organic obstruction of the Œsophagus, contains the particulars of his case of Œsophagotomy, and the history of the operation, which has been very rarely performed. Dr. W.'s case in itself (independently of the skill and ingenuity displayed in prolonging the life of the patient,) is calculated to throw but little light on the subject, and its result is not such as to encourage others to penetrate the Œsophagus, except as a dernier resort in cases of impending death. The Doctor suggests the propriety of making an opening into the stomach itself, in cases of insurmountable stricture of the Œsophagus with progressing inanition, and cites the repeated instances in which perforations of that viscus have terminated favorably. It may be apprehended, however, that the operation performed under the only circumstances that could justify it, namely, impending death from inanition, would not be so apt to terminate favorably as when it has been the result of

accident, and in a system not previously enfeebled by long suffering and insufficient nutrition.

The article on Isopathia or the Parallelism of Diseases, by Dr. JOHN M. B. HARDEN, of Liberty county, Georgia, is highly creditable, and evinces much research and correct views on one of the most important classes of maladies. The more we study the effects of the cause of Intermittent fever, the more convinced will we become of its power to give rise to phenomena the most discordant in appearance, yet all traceable by the enlightened physician to the same deleterious agency, and controlled by the same class of remedial means. The stamp of intermittency, either complete or partial, is the grand characteristic of all the morbid phenomena, however varied in other respects they may be, that owe their development to this unknown and widely pervading cause.

Dr. TABB's Statistics of Deaths in the Philadelphia Hospital during a period of twelve years, possess much interest, as must do all such papers when judiciously and accurately drawn up. As illustrative of the value of such documents, we will cite a few of the results obtained by Dr. TABB. The treatment of Mania a potu has, it is well known, been generally by opiates, and during the first six years, included in these tables, when this plan was used, the deaths averaged 1 in 10, whereas during the latter six years, when alcoholic drinks were substituted for opiates, there occurred but one death out of 223 cases. Again, in the Women's Asylum, in which neither opiates nor alcoholic drinks were resorted to in the treatment of this disease, there was also but one death in 128 cases. Such facts need no comment. We have long since entertained strong doubts of the advantage of opiates, and relied principally on the cold shower bath as the most powerful and prompt means of allaying the ravings of delirium tremens. The table of diseases of the Respiratory organs, shews that one fourth of the fatal cases of Pneumonia occurred in children under the fifth year of age, and of Bronchitis more than one third. Although these proportions are undoubtedly much greater in the latitude of Philadelphia than in Georgia, they are certainly much greater here than is usually believed, a fact of which the profession will become more aware as the use of the stethoscope becomes more general with our practitioners. On the subject of the Exanthemata, it is found that the number of deaths from Measles is much greater than from Scarlatina. It is to be regretted that the proportion of deaths to cases admitted of the same disease, is not included in these tables, with the exceptions given in relation to Mania a potu. D.

ARTICLE V.

The New-York Journal of Medicine and the Collateral Sciences—
Edited by SAMUEL FORRY, M. D. Nov. 1844.

The periodical, the title of which is given above, is published every two months, and has now reached its ninth number, having fully realized and sustained the anticipations of all acquainted with the merits of its very able Editor. We are not of those who regard a multiplicity of medical journals or of medical schools as having an injurious effect on either medical literature or medical instruction. Indeed there is no proposition, the fallacy of which has been more fully established by experience. It is notorious that the number of contributors has uniformly increased in a direct ratio with that of periodicals; and able observers who had never before lent their aid to the advancement of science, by publishing the results of their labors, have been incited to do so by the establishment in their vicinage of a medium of easy access. Nor is the case dissimilar with regard to new medical schools. The very appointment of individuals to Professorial Chairs acts as the most powerful incentive to exertion, not only on the part of those who must prepare themselves to teach, but also on the part of all who come under the reach of their influence and who possess sufficient professional pride not to permit themselves to be distanced in the race for scientific distinction. We therefore hail every new journal and new school as the sure precursor of a better state of things within the whole range of their respective influence.

The profession in New-York are justly entitled to an organ of communication with our extensive country, and we sincerely wish the fullest success to the work now before us. Among the contributors to the 9th number, we remark the name of a distinguished physician of a sister city, all of whose articles that have come under our observation, evince a mind well stored with professional as well as literary lore, and a ready pen to communicate the deductions of sound judgment. The article of J. LE CONTE, M. D., of Savannah, is entitled, "Extraordinary Effects of a Stroke of Lightning;" but, not confining himself to the mere narration of the circumstances

attending the case, the writer takes occasion to touch upon various subjects of much interest. The function of menstruation having been singularly affected in two of the individuals who received the electric stroke, the writer reviews the present state of our knowledge of this interesting peculiarity of the human female—the age of its occurrence and final cessation—its connection with the state of the ovaries and impregnation, &c. He then passes to the consideration of the general and local effects of electricity on the human body, and its use as a remedial agent; and concludes with many valuable remarks on meteorology. The whole article is highly creditable to the writer.

Article II. is from the pen of the Editor, Dr. FORRY, and is on the "Nature and History of Vital Statistics," than which no subject possesses more intrinsic value to society. Dr. F.'s attention has been for some time strongly directed to this kind of research—his contributions are therefore always interesting. With the following remark, the writer furnishes a few tables, which we cannot refrain from transferring to our pages.

"All the phenomena of the human frame, but more especially the physiological acts connected with reproduction, the development of man's faculties, and mortality, when examined and measured in a great number of individuals, it has been proved by observation, furnish a mean result equally correct with that of any other physical phenomena."

* * * * *

"As regards diseases, it will suffice to give a few instances from the Fifth Registration of Births, Deaths, and Marriages in England, as presented in the following table :

	1838.	1839.	1840.	1841.
<i>Pneumonia</i> :—				
Total deaths,	17,999	18,151	18,582	17,997
Deaths to a million living,	1,219	1,200	1,209	1,154
<i>Phthisis</i> :—				
Total deaths,	59,025	59,559	59,923	59,592
Deaths to a million living,	3,996	3,939	3,897	3,822
<i>Child-birth</i> :—				
Total deaths,	2,811	2,015	2,989	3,007
Deaths to a million living,	190	193	193	193
<i>Violent Deaths</i> :—				
Total Deaths,	11,727	11,632	11,594	11,100
Deaths to a million living,	794	769	754	712

But even the conditions which seem to depend wholly on accidental causes, have the same constant recurrence, as is shown in the following table in reference to the recruitment of the French army.

NUMBER OF YOUNG MEN IN FRANCE WHO HAVE BEEN EXCUSED MILITARY SERVICE ON ACCOUNT OF BODILY INFIRMITIES.*

Causes of Unfitness.	1831.	1832.	1833.
Wanting fingers,	752	617	743
" teeth,	1,304	1,243	1,392
Deafness and dumbness,	830	736	725
Loss of other limbs or organs,	1,605	1,530	1,580
Goitres,	1,125	1,231	1,298
Lameness,	949	912	1,049
Other deformities,	8,007	7,630	8,404
Diseases of bones,	782	617	667
Short-sighted,	948	891	920
Other affections of the eyes,	1,736	1,714	1,839
Itch, (?)	11	10	10
Scald head,	749	800	794
Leprosy,	57	19	29
Other cutaneous diseases,	937	983	895
Scrofulous affections,	1,730	1,539	1,272
Affections of chest,	561	423	359
Hernia,	4,044	3,579	4,222
Epilepsy, (falling sickness,)	463	367	342
Different other diseases,	9,168	9,058	10,286
Weakness of constitution,	11,783	9,979	11,259
Insufficient size of body,	15,935	14,962	15,078
Amount of whole class of certain age,	295,978	277,477	285,805

The reports of criminal justice in France show the same remarkable constancy as regards the annual perpetration of crimes, and their punishments, as appears from the subjoined table†:—

	1826	1827	1828	1829	1830	1831
Murders in general,	241	234	227	231	205	266
Gun and pistol;	56	64	60	61	57	88
Sabre, sword, stiletto, poniard, dagger, &c.	15	7	8	7	12	30
Knife,	39	40	34	46	44	34
Cudgels, cane, &c.	23	28	31	24	12	21
Stones,	20	20	21	21	11	9
Cutting, stabbing, and bruising instruments,	35	40	42	45	46	49
Strangulations,	2	5	2	2	2	4
By precipitating and drowning,	6	16	6	1	4	3
Kicks and blows with the fist,	28	12	21	23	17	26
Fire, .....	..	1	..	1	..	..
Unknown,	17	1	2	..	2	2

These results assuredly merit the attention of the philosopher; for it is here seen that even moral phenomena, apparently the most acci-

* Quetelet's Treatise on Man. Edinburg Edition, p. 109.

† Ibid., p. 6.

dental or fortuitous, are produced annually in the same numbers. Aye, even murders, which are generally committed at the close of quarrels, without any premeditation, do not only present very nearly the same annual numbers, but experience further shows that the instruments used to accomplish the object bear like proportions in each year."

These extracts are sufficient to show the importance of vital statistics to science and to society at large. Facts are always valuable, but especially so when their bearing is on the social system of the human family. We would earnestly entreat all who have it in their power to contribute to this fund, to neglect no opportunity to do so. Europe is far in advance of us on this subject, and it is much to be regretted that the only attempt of our National Legislature to assist in the matter, has proven so complete a failure in many respects.

Article III. is "On the Pathological Effects of Alcohol, by JOHN C. PETERS, M. D." It contains a summary of post-mortem appearances of the bodies of seventy persons who died from intemperance. The most interesting facts are the following:—The substance of the Brain was unusually white and firm.

"*The Lungs* were generally healthy, except that congestion of them was frequently met with. Where large quantities of spirits had been taken shortly before death, the lungs were often found in a state of extensive splenization; they appeared perfectly saturated with dark blood, which soon changed to a florid red on exposure to the air, except that which flowed from the large, severed blood-vessels, for this remained thick, dark, and tar-like. The parenchyma was heavy and semi-solid to the feel, but softened; for the finger could be easily forced through it. We must make particular mention of the infrequency of phthisis in drunkards; never have we met a tubercular abscess in them, even of the smallest size, while a small number of chalky tubercles was frequently noticed; and cicatrices also were often met with, and were marked by presence of puckering of the surface of the lungs, of solid bodies which were readily felt before the lungs was cut into, and when this was done, they were found to consist of lumps or stripes of callous fibrous tissue, around which we rarely discovered a few discrete, grey, crude, small, tubercular granulations; in every instance these appearances were strictly confined to the upper third of the superior lobes, and the rest of the lungs was entirely free from either old or recent tubercular disease. The bronchi were almost always found reddened, somewhat dilated, and more or less filled with catarrhal secretions. The readers of the London Lancet will remember that Marshall Hall has lately recommended the constant application to the chest of folds of linen or

flannel soaked in alcohol, as a cure for incipient phthisis; we should judge that this might prove serviceable.

* * * * *

"The *Liver*, in moderate drinkers, was found a little larger than natural, somewhat softened, and its external surface spotted with patches of fatty infiltration, which extended but two or three lines into the parenchyma; the color of the rest of the organ was nearly natural, and the edges retained their normal sharpness. In higher degrees it was considerably larger, the edges more obtuse, and the patches of fat larger and more numerous. In old drunkards the liver was very large, weighing at least six to eight pounds, often ten to twelve; the edges were very thick and much rounded; the parenchyma almost white with fat, soft, fragile, and the peritoneal covering could be torn off in very large pieces with ease. Granular liver was found in four or five cases only. The *gall bladder* was always large and filled with bile; gall-stones were found in two cases only, and singularly enough, both on the same day; none were found either before or after.

* * * * *

"The appearance of the *omentum* is very peculiar; it is loaded with an ashey-grey slushy fat. Our attention was called to this sign in Vienna; it is there regarded as so characteristic, that a man is often judged to have been a drunkard, from a glance at the omentum, when the abdomen is first laid open.

* * * * *

"According to Rokitsansky, Andral and Engel, the blood in tubercular cachexia is arterial and rich in fibrin; while in the cancerous cachexia and typhus fever, it is more venous, it abounds in albumen, and is deficient in fibrin; hence alcohol would seem to produce a state of the blood opposite to that which occurs in tubercular disease, and is somewhat similar to that which obtains in cancer; therefore, it may prevent the development of the former, and hasten that of the latter."

Article VII. is from the pen of Dr. JAMES STEWART, who furnishes valuable hints on the diet of infants in affections of the bowels—and specially insists on the advantages of animal food in such cases. Dr. S. recommends the substitution of calfs-foot jelly, or isinglass jelly, in lieu of the preparations of arrow-root, sago, flour, &c. in common use. Dr. S.'s experience in the treatment of infantile diseases entitles his views to much weight. They coincide very fully with those of the writer of this notice.

D.

ARTICLE VI.

We extract the following article from the Medico-Chirurgical Review. We regret that its length renders its division necessary. The remainder will be published in our next number.

Therapeutique Appliquee, ou Traitements speciaux de la plupart des Maladies Chroniques. Par P. J. C. DEBREYNE. 2me. Edition, pp. 332. Bailliere, 1844.

This is really a very useful and instructive work. It contains the results of our author's experience, over a period of nearly thirty years, in a variety of those chronic diseases which are of most frequent occurrence. Dr. DEBREYNE is evidently a shrewd and practical observer; he has learned to think and reason for himself; and seems to have had, throughout his professional life, a marked aversion for all the nosological theories which have occupied so largely the attention of most of his countrymen during the present century. See, how he treats the chiefs of philosophical (!) medicine.

"The Pinel-ists, the organicians, the anatomo-pathologists, the Broussais-ians, the statisticians, the numerists, have all, by the exclusiveness of their particular doctrines and views, stood in the way of, and materially retarded the advance of sound therapeutic knowledge. Now, however, that the system of universal irritation and of a materialist physiologism has fallen to pieces, a new era has happily opened up to our view, and Hippocratic vitalism has reappeared amongst us in all its primitive splendour. . . . The reign of anatomism, that is to say, of necropsies and facts and figures, has nearly come to an end; and medical men now long for something more tangible and more applicable to the every-day duties of a professional life; in other words, they wish to have pointed out to them useful rules of treatment and rational means of cure, instead of endless catalogues of statistic tables and of post-mortem examinations."

Dr. D. is professor of practical medicine to the establishment of Grande-Trappe (Orne), and seems to have reared a number of pupils, who have contributed, for some years past, not a little to disseminate his peculiar doctrines and modes of treatment in different districts of France. He is, moreover, the author of several treatises—on Physiology, Hygiene, Moral Theology in its relations with Medicine, of which we gave a short notice in the last number of this Review. However much we may feel inclined to dissent from him on several points of practice, we have been decidedly pleased with the general tone of the present work, which appears to be a faithful record of discriminating observation of disease at the bedside of his patients. There is nowhere any parade of learned phrases; no darkening of knowledge with a multitude of words; no wearisome and

most profitless description of very common cases; no heaping together of other men's opinions and doings, with a hesitating announcement of his own. Instead of this, we have a plain unvarnished tale of what the author has seen and found in practice; and all this explained in as few words as possible. In fine, this book is thoroughly and essentially a practical one—a somewhat uncommon feature, by the by, of a French medical work in the present day. Its motto is *experire*: our readers cannot do better than accept the challenge and judge for themselves.

The diseases which pass under review, are arranged in three divisions—Neuroses or Neuropathies; Chronic Phlegmasiæ; and Astheniæ. We begin with a short notice of

Epilepsy.—The remedy, which Dr. D. has found by far the most successful in the treatment of this disease when it is idiopathic, and there are no symptoms of existing cerebral congestion, is the extract of Belladonna. He gives it in the form of pill; beginning with about one or two grains *per diem* at first, and gradually raising the dose to four or five grains, provided no affection of the sight or any other intoxicating symptom is induced. In some cases, he conjoins with advantage the use of a decoction or infusion of Valerian. But neither this latter remedy, nor yet the oxyde of Zinc, nor the nitrate of Silver—although all of them have been found occasionally useful—can be trusted to alone. In general, the more frequent the paroxysms are, the more hopeful we may be of making an impression on the disease: it is when two or more months intervene between each attack, that this Neurosis is usually most obstinate and intractable. In such cases, the Belladonna should be administered for a week or two before the expected invasion. When this is preceded by a distinct *aura Epileptica*, a strong dose of Ammonia will sometimes serve to ward off the attack: the patient therefore will do well to carry a small phial of the volatile alkali in his pocket. In some cases, the paroxysms of Epilepsy may be arrested for several months by the use of the Belladonna; but nevertheless they ultimately return almost as frequently as ever, in spite of the prolonged continuance of the remedy. It is under such circumstances as these that the decoction of Valerian root, or of Orange leaves, should be exhibited at the same time.

Dr. DEBREYNE does not conceal the fact that several writers have recorded their opinion that his favourite remedy has utterly failed in their practice. He mentions particularly a report by M. PICARD of 22 cases that were treated with it by M. FERRUS, in the Bicêtre Hospital, in 1837. He attributes its failure in these cases—in part at least—to the injudicious manner in which the extract was given; the doses being far too large, and carried to such an extent as to prove rather poisonous than sanative. This is certainly not the way to give a fair trial to the remedy.

Our author remarks that, “if in symptomatic Epilepsy, after the

removal of the exciting cause, the paroxysms continue from a sort of nervous habitude, they will be best obviated by the Belladonna; and, in the event of this failing, by the use of Quinine and Valerian."

Hysteria.—The following formula is very highly lauded by Dr. D. in the treatment of this too common disorder.

R. P. Camphoræ . . .	℥ ss.
P. Assafœtidæ . . .	℥ ss.
Extr. Belladonnæ . . .	℥ iv.
Extr. aquos. Opii . . .	℥ j.

Mix and divide into 120 pills; commence with two at first *per diem*, and gradually increase the dose to six in the 24 hours; they should always be taken before food. Occasionally a wine glassful of the Infusion of Valerian or Orange leaves may be given with much advantage along with each dose of the pills.

Dr. D. is in the habit of administering them also for the cure of general or partial nervous Trembling, and of *Chorea*. Sometimes he exhibits in the latter disease, the Belladonna by itself; and, he says, very generally with success. When it fails, he has recourse to cold bathing. No allusion is made to the use of Steel in the treatment of this complaint by our author; an omission that seems the more strange, as we shall afterwards find that he is so partial to ferruginous medicines in the treatment of many diseases of debility. According to our opinion, the remedy for *Chorea* is the carbonate of sesqui-oxyde of Iron, especially when administered in any bitter infusion.

Neuralgia.—"For the last fifteen years, we have been in the habit of using with the greatest success, in all the forms of neuralgia,—Sciatica excepted—the Belladonna as an external application. Our favorite formula is this:

R. Extr. Belladonnæ . . .	℥ ss.
Opii pulveriz.	℥ ij.
Adipis suis	℥ ss.
Olei thymi	℥ vj. M.

A portion of this ointment, as big as a hazel-nut, is to be well rubbed upon the affected part two or three times a day, or whenever the paroxysms of pain are severe. The rubbing should be continued for eight or ten minutes at a time, until the ointment is quite absorbed by the skin: a little saliva may be added every now and then to promote the absorption. Let it be remembered that the use of this ointment should be at once suspended, if the sight becomes very sensibly affected, or any unpleasant cephalic symptoms supervene. In very obstinate cases, Dr. D. conjoins the internal administration of the extract of Belladonna or Opium with the use of the above pomade; but in the majority of instances, this is unnecessary, as the pain will very generally yield to the outward application. We employ it, he says, specially against facial neuralgias and other local painful affections of a nervous character, the Megrim, &c. In one

very severe case of Neuralgia, which had lasted for nearly twenty years, and which had resisted our author's quasi-specific pomnade, as well as a score or two of other approved remedies, the pain which was seated in the skin, over the lower left ribs, at length yielded to the application of the Vienna Caustic paste, so as to produce a pretty large eschar upon the affected part.* With respect to the treatment of Sciatica—which, as we have seen, Dr. D. separates, in a therapeutic point of view, from the other forms of Neuralgia—his usual plan is first of all to order the application of several *volante* blisters along the course of the affected nerve; and if these do not quickly succeed in relieving the pain, to have recourse to his terebinthinate mixture, which is only a modification of that recommended first by Professor RECAMIER, and subsequently by Dr. MARTINET. The formula is this:

R. Aquæ lactucæ	℥ viij.
Olei volat. terebinth. . .	℥ j.
Gummi Arabic	℥ v.
Syrupi simpl. . . .	℥ iiss. M.

The dose, a large table-spoonful in a glassful of rice-water, three times a day, upon an empty stomach. Dr. DEBREYNE recommends at the same time the external application of an embrocation—composed of Spirits of Turpentine, Ammonia, Camphorated Spirits of Wine, and melted lard,—with which the affected parts are to be vigorously rubbed night and morning. In still more intractable cases, he has recourse to the use of moxas, applied over the seat of the chief pain; the best point generally for their application is immediately behind the great trochanter. In conclusion, he frankly admits that the use of his favorite Belladonna ointment is seldom efficacious for the relief of Sciatica.

Paraplegia and Local Palsy.—"Before we were acquainted," says Dr. DEBREYNE, "with the special action of Nux Vomica on the spinal-marrow, we were in the habit of trusting almost entirely to the use of moxas, applied over the lumbar or sacral vertebræ, for the cure of Paraplegia. But, for the last twenty years, we have invariably commenced our treatment of this disease with the alcoholic extract of the Nux Vomica, exhibited in the form of pills, each containing one grain of the extract." He begins with one, and gradually increases the dose until six—two at three different times—be taken in the course of the twenty-four hours. Whenever the patient experiences cramps and spasmodic twitches or tetaniform rigidity in the limbs, the action of the medicine must be narrowly watched; and it will be prudent either to diminish the dose, or even to suspend its use altogether, if these symptoms become excessive. The object should be to keep up the nervous excitement in a moderate and safe degree,

* *Vienna Caustic.*—Equal parts of vegetable caustic and quick lime, moistened with alcohol. EDVS.

for a considerable space of time. If after a month or two's use of the Vomica, no decided benefit is obtained, Dr. D. advises the application of one or more moxas over the lumbar region.

He very properly cautions his readers not to expect the same benefit from the use of the Nux Vomica in the Hemiplegic, as in the Paraplegic, forms of Palsy. It may, indeed, prove serviceable in some cases of the latter, where there is every reason to suppose that the sanguineous coagulum within the cerebral substance has been nearly or altogether absorbed; but in no case of this description should we be sanguine of doing much good.

For the cure of *Amaurosis*, our author relies chiefly on the repeated application of small blisters in the neighborhood of the affected eye, first on the temple and then over the eyebrow. In obstinate cases, the blistered surface should be sprinkled with a powder composed of starch and strychnine—about a fifth of a grain may be used at first, to be gradually increased. When this treatment fails, a seton should be tried. Dr. D. has used with very decided success a collyrium, containing some extract of Belladonna, in a good many cases of day blindness or *Nyctalopia*.

He also mentions a simple remedy for nervous *Deafness*, which may deserve notice. Let the patient fill his mouth with the smoke of Tobacco, or of any other dry aromatic plant—Sage, for example—and then make a forced expiration, while the mouth and nostrils are closed: this should be done several times in the course of the day. The smoke enters the Eustachian tube, and thus produces a slight stimulant effect upon the internal ear. The remedy can do no harm; and this is saying a good deal in its favor, considering the nature of many of the means of acoustic medication. It is best suited to those cases where the deafness has supervened on some catarrhal complaint, and whenever we have reason to believe that the pharyngeal end of the Eustachian tube has become thickened or obstructed.

Asthma.—"For the last twenty-five years we have seldom prescribed any other formula but the following:—

R. P. Inulæ Elecam.	. . .	℥ ss.
Flor. Sulphuris	. . .	℥ ss.
P. rad. Belladonnæ	. . .	℥ iv.
P. rad. Scillæ	. . .	℥ j.
Kermes min.	. . .	℥ j. M.

To be divided into 90 powders, of which one is to be taken three times a day.

Our author assures us that he has witnessed excellent effects from this remedy, not only in asthma, but also in a variety of chronic pectoral affections, when they are unaccompanied with fever or inflammatory irritation; as, for example, in what has been called Catarrhal Phthisis, and so forth. To allay the cough in such complaints, he combines the use of the Iceland moss jelly with the anti-asthmatic powders. When these fail—which, according to his report, is not often the case—he advises a trial of the Stramonium inhalation, and also of a strong infusion of the *Camphree* of Montpellier (Camphor-

asma Monspeliaca)—with the medicinal virtues of which our author was first made acquainted by a writer in the *Revue Medicale* for March, 1821. During the paroxysms of asthmatic dyspnoea, he recommends a mixture containing the extract of Belladonna, Oxy-mel of Squills, Kermes Mineral and Orange-flower Water.

In *Hooping-cough* also he again mainly trusts to the internal use of the Belladonna, in the form of its powdered root. This remedy was employed with very marked success by WETZLER during a severe epidemic of this disease that prevailed at Augsburg in 1810; and it was about seven years afterwards that our author first gave an extensive trial to it. The dose of the powder must, as a matter of course, depend upon the age of the child, its constitution, the character of the existing symptoms, and so forth; but, if we state that a third of a grain should be given to a child twelve months old, twice or thrice a day, it will not be difficult to apportion the doses to other ages. When the fits of coughing are usually followed by vomiting, the powder should be given very soon after this has ceased. We need scarcely say that, if symptoms of inflammatory irritation be present, these must be subdued by the appropriate remedies, before recourse is had to the use of the Belladonna powder.

In accounting for the failure of his favourite remedy in the hands of several medical men, who have recently published the results of their experience with it, Dr. D. alludes with much judgment, to some of those causes or influences which should always be attended to, in estimating the virtues of a medicine in any epidemic disease; and the neglect of which, in the present day, has induced such striking discrepancy of opinion on various practical points among different writers, as is any thing but creditable to the sagacity of professional men.

"Before," says he, "any one can fairly and satisfactorily determine the medicative virtues of Belladonna, or indeed of any other remedy, in Hooping-cough, by the effects which it may produce in any particular epidemic, it is absolutely necessary that he should imitate the example of such observers as SYDENHAM and SCROLL, and have first carefully noted the type and genus of the epidemic itself, in order that he may know *in limine* whether it be inflammatory, or catarrhal, or bilious, &c. in its nature. He should moreover have attentively ascertained the character not only of the medical constitution of the season, but also of the prevailing diseases of the preceding as well as of the current year, so that he may be able to determine, if possible, their cor-relations and mutual dependencies. If the existing epidemic proves to have an inflammatory character, it is scarcely necessary to say that the use of antiphlogistic measures is an indispensable preliminary in the treatment: whereas, if it has a bilious type, we must trust more to the use of emetics and purgatives, before having recourse to the exhibition of the Belladonna."

Before dismissing the subject of Coughs, we may state that Dr. DEBREYNE very strongly recommends the internal use of the extract of Belladonna, in the form of mixture, in most coughs of a nervous nature occurring in adults. He mentions the case of a woman, who had been afflicted with a violent convulsive cough for upwards of twelve years, that was speedily relieved by this remedy—does, one

grain two or three times a day. It is equally serviceable in the cure of obstinate Hiccup, and of any spasmodic constriction of the throat and larynx.

An ointment, composed of four parts of the extract and twelve or fifteen of spermaceti ointment, may be most advantageously used with much benefit in many cases of contraction of the anus, and painful affections of the cervix uteri: also in various neuralgic complaints of the bladder and urethra.

We now proceed to notice some of the most common gastric and intestinal affections, for the purpose of explaining our author's therapeutic views; and first of all we take the subject of

Vomiting.—In the vomiting that may be considered to be nervous or spasmodic in its nature—i. e. when it is not connected either with inflammation or any bilious disturbance of the stomach—he recommends very highly the use of Columba powder: it possesses, he says, a sort of specific virtue in such cases nearly as great as Bark does in Agues. He gives it in doses of from 15 to 20 grains in two or three spoonfuls of red (French) wine, before meals. The addition of a few grains of magnesia, or of a minute dose of opium, may be necessary, if much acidity or gastralgia be present; and, should the patient be feeble, and anæmic, the subcarbonate of iron may be very advantageously combined with it. Opium is freely used by Dr. D. in various abdominal affections, after the state of the intestinal secretions has been ascertained to be tolerably healthy. The following quotation will show how highly he rates its value.

"We treat all internal pains whatsoever, and more especially those of the abdomen, with some preparation of opium—provided always they are not connected either with acute fever, or with inflammation, or gout. We may, indeed, make a still more general assertion, and say that it is to the use of opium—which is *the* antidote of pain—that we mainly trust for the relief of all painful chronic diseases. If along with the element of pain, there should happen to be co-existing a rheumatic principle—whether this show itself externally or in some internal organ—we associate the use of rubefacients and other appropriate medicines along with that of opium. Without this most valuable drug, there could be no possible medication for a multitude of chronic diseases. If we were deprived of it, we should ourselves instantly abandon the practice of the healing art. SYDENHAM thanked God for His gift of opium to mankind for the cure of so many of the ills to which we are liable; and we can safely affirm, as far as relates to our own practice, that never a day passes over that we have not occasion to exhibit opium in some form or another. How admirably it acts, almost as a specific, in most cases of Dysentery, not to enumerate a host of other maladies."

PART III.—MONTHLY PERISCOPE.

Process of Secretion.—The greater number of the fluids, which constitute the basis of the different secretions—such as the gastric and intestinal juices, the saliva, tears, milk, mucus, wax of the ears, fat, &c.—proceed from a gradual dissolution of the substance of the very glands which are generally supposed to eliminate them. The blood, no doubt, furnishes certain elements for each secreted fluid; but that which constitutes the characteristic constituent of each secretion, is the fluid contained in the microscopic *cells*, which enter into the formation of every gland:—this fluid is poured out in consequence of either the bursting, or the dissolution, of the cellular envelopes. The *cells*, which along with the *blastema* constitute the parenchymatous substance of glands, are developed within the minute secreting canaliculi. When they have attained to a certain degree of maturity, they detach themselves from the interior, and are carried along in the secreted fluid.—*Mandl's Manual of Gen. Anat. applied to Physiology and Pathology—from Am. Jour.*

Case of Malformation of the Heart of a Child, who expired on the fifth day after Birth.—The child was well developed, and appeared to be in perfect health. On the third day it became soporose, sighed and had hurried respiration. The skin became dusky, breathing increased in rapidity, no fever, respiratory murmur puerile, with moist crepitus behind; the child died on the fifth day.

Autopsy.—There was only one large artery given off from the heart, and from this the pulmonary artery sprang. The thus united aorta and pulmonary artery was considerably larger than the aorta of so young a child. It proceeded from a large ventricle, which appeared at first sight to constitute the whole of the ventricular portion of the heart. The systemo-pulmonic artery was separated from the ventricle by semilunar valve, and from a very large auricle by tricuspid valve. Into this auricle entered by three openings, three pulmonary veins. The large auricle communicated by a small opening with another auricle, about the size of a small horse-bean, into which entered the two *venæ cavæ*, each not above two lines in diameter. This small auricle communicated with a cavity of the size of a swan-shot, in a fatty muscular mass upon the side of the large ventricle, constituting with it the whole ventricular mass, and evidently being the representative of the right ventricle. The right ventricle and the right auricle were separated from each other by small cobweb-like membranes, representing the ventricular valve.

The circulation of, in all other respects, an apparently well developed child, was thus reduced to that of a reptile of the lowest order,

very nearly resembling that of a frog. The very small size of the *venæ cavæ* would lead to the supposition, that the circulation of the blood, enabling a child to live in the air, for five days with so slight derangement for two days at least, could not be carried on with the adequate return of blood from the system which such veins would indicate, and that one of the three orifices by which the blood returned into the large auricle was that of a systemic vein. The auricle is of much greater capacity than that of the united auricles of a child of that age ought to be. It cannot even be conceived that extra-uterine life could continue with such an inadequate return of venous blood, as is indicated by the small proportion of the two *venæ cavæ* to the pulmonic systemic artery.—*Dr. Carson in the Report of the Liverpool Pathological Society. Dublin Journ., for Sept. 1844.*

Period at which the foramen ovale, the ductus arteriosus and ductus venosus become obliterated.—It results from the investigations of M. ELSSÉSSER, made on 144 children, that the obliteration of these temporary circulatory channels, does not take place until a month or six weeks after birth.—*L'Experience, Aug. 24th, 1843, from Heke's Zeitschrift, t. 42—from Am. Jour.*

Open Foramen Ovale—no cyanosis—Dr. WOODHOUSE exhibited to the Reading Pathological Society, a heart taken from a woman aged 71, who died of apoplexy. The foramen ovale was patulous to a considerable extent—about half an inch; the valvular portion of the septum auriculorum unusually large. There were no symptoms during life, as lividity of countenance, deficient nutrition, &c to indicate such a condition.—*Prov. Med. & Surg. Journ., July 24, 1844.*

It was but recently that the doctrine was taught in the Schools, that impregnation generally took place just after menstruation. It will be seen that a different theory is now advocated, and said to be sustained by facts, in the following Report, copied from the British and Foreign Medical Review :

Escape of ova independent of fecundation, and the connection of this with menstruation.—Each act of menstruation is connected with the maturation and discharge of an ovum. Numerous cases in proof of this, are related (in addition to those formerly recorded by him, and by M. M. GENDRIN, NEGRIER, and others.) by Dr. ROBERT LEE; others by Mr. GIRDWOOD. M. RACIBORSKI has four times found that ova have been recently discharged from the ovaries of virgins who died at or near the period of menstruation; and BISCHOFF has also four times found Graafian vesicles, containing effused blood, in girls who have recently menstruated.

This menstrual discharge of an ovum is said by RACIBORSKI and BISCHOFF to be followed by the formation of a corpus luteum, similar to that which is formed when the ovum is impregnated and developed

[But in this I have no doubt they are mistaken. If it were so, one or more corpora lutea should be found in the ovaries of all who die while the habit of menstruation continues; for the *corpus luteum* which forms when impregnation has taken place, is distinct not only through the pregnancy, but for more—often much more—than a month after delivery. Neither are the cavities which are left after the menstrual discharge of ova, or the processes by which they are closed, at all similar to those found when impregnation has taken place. In many examinations of ovaries I have not yet seen a case in which, without impregnation, any thing has been found which could be mistaken for a *corpus luteum* formed after an ovum has been discharged and impregnated.] Mr. GIRDWOOD believes that the cicatrices left after the discharge of menstrual ova may be counted, so as to indicate the number of ova discharged and the number of times of menstruation. [But recently I have examined a case in which a girl of seventeen had not menstruated for four months before her death, but previously had menstruated regularly: the ovaries showed no cases of cicatrices. Probably, therefore, the cicatrices remain for a time distinct, but are gradually obliterated, as they are in the nearly analogous case of the discharge of the Peyer's and solitary glands of the intestines.]

3. The menstruation of women, in so far as the periodical maturation and discharge of ova is concerned, is analogous to the *heat* or *rut* of animals. The phenomena, according to RACIBORSKI may be most distinctly seen in the sow; but in all the domestic mammalia at their period of heat one or more follicles attain their highest degree of development, project upon the surface of the ovary, and at length burst with hemorrhage into their containing cavities, and this whether copulation have taken place or not. BISCHOFF also has repeatedly found the same things occur in bitches and rabbits whose uterus and tubes have been extirpated: they have heat, the ova mature and detach themselves and pass into the remaining portion of the tube, but of course cannot be impregnated.

4. The discharge of the ova and their passage along the tubes are independent of impregnation and the passage of the seminal corpuscles. This is evident from the facts already mentioned; and others are furnished by BISCHOFF. In one experiment he kept a bitch carefully secluded till the period of heat ensued. She then copulated once, and immediately after he extirpated the left uterine horn, ovary and oviduct. The copulation had lasted a quarter of an hour; and he found that the semen had penetrated to the upper angle of the uterine horn, but not into the tube. He found also five ova in the oviduct more than two inches from its abdominal orifice; a distance sufficiently great to prove that they had not been detached in the copulation. Next day he killed the bitch, and found that spermatozoa had reached about a quarter of an inch in the right tube; he found also five ova in the same tube, and as many *corpora lutea* in the right ovary, but none of the spermatozoa had come in contact

with the ova. These cases proved the detachment of ova before copulation. In some others BISCHOFF found that they were not detected till long after the act. In some he found that they were undetached twenty-four hours after copulation, and that the seminal corpuscles had passed on towards them. In others also he found the independence of the passages of the ova and the semen still more marked; for example, several days after copulation, ova were found fecundated in one tube, but in the other spermatozoa alone, none of the Graafian vesicles in the corresponding ovary being either enlarged or fully developed.*

5. Thus, according to the period of heat at which copulation takes place, will be the place at which the semen meets the ovum. If it be early, the ovum may not escape before the semen reaches the ovary; if late, the ovum may have arrived at the uterus; and probably if it have arrived at the lower or uterine third of the tube before it comes in contact with the semen, impregnation is impossible on account of the changes which the vitellus has already undergone. In women it is in like manner near the period of menstruation that impregnation is most likely to occur. It may take place just before menstruation if the ovum be just mature when the semen reaches the ovary; or some days, the ovum after its discharge remaining impregnable till the semen reaches it. Or, again, as many analogous circumstances in lower animals prove, an ovum may by the sexual excitement be hurried on to its maturity and discharged; and so, in unusual cases, impregnation may take place at a greater than usual distance from the menstrual period. Still the most common time must be, as common observation shows it is, either during or very near the menstrual period. M. RACIBORSKI has found that in one hundred women there are not more than six or seven in whom this is not the constant rule.

6. All these circumstances prove a closer analogy than was supposed to exist between the discharge of the ova of mammalia and those of the fish, batrachia, and others in which the ova are discharged from the body and impregnated external to it. In all alike the discharge of the ova is an independent act; the differences are in the distances from the ovaries at which the semen is usually brought into contact with it.

* These facts bear on the question of the possibility of a woman conceiving by two different men; and I find a recent notice of a case, often referred to, of a negress who having, as it was believed by herself and others, conceived twice in the same night, first by a negro and afterwards by a European, bore twins, of which one was a pure negress, the other a mulatto. Dr. HILLE, a Dutch military surgeon in Surinam, where the delivery occurred, adds that the children were living in 1841, that they were eight years old, that the black child, which was at first the strongest of the two, remained so, and that the mother had died some time previously, and on examination was found to have normally formed genital organs. (*Casper's Wochenschrift*, Jan. 28, 1842.)

Age of Puberty in Girls.—Mr. ROBERTSON,* of Manchester, in continuation of some former papers, the object of which was to prove that the age of puberty is as early in the cold as in the tropical regions of the earth, and that the early fecundity in Hindostan and other warm countries is only the consequence of early marriages, proceeds now to show, that in all countries alike, early marriages (and early fecundity) are always connected with moral and political degradation, as exhibited in bad laws and customs, the enslavement more or less of the women, ignorance of letters, impure and debasing systems of religion; and that they bear no relation to the climate of the country.

His evidence is extensive and very interesting; and the conclusions he arrives at are, 1. That in England, Germany, and Protestant Europe in general, early marriage, i. e. marriage about the age of puberty, is comparatively rare. 2. That early marriage prevails among the uncivilized tribes within the arctic circle, as it likewise does in *all* cold countries, the inhabitants of which are in a state of ignorance and moral degradation. 3. That throughout European Russia, which is confessedly low in civilization, extremely premature marriage was the universal custom at no distant date. 4. That at the present day, in the most southerly countries of Europe, where the people are immersed in superstition and ignorance, marriage is early. 5. That in Ireland, which as to its moral condition somewhat resembles the last mentioned countries, the marriage union takes place among the Roman Catholic population almost as early. 6. That in England, about two centuries ago, when debasing political and social circumstances combined to favor the practice, early marriages were general, at all events in the upper ranks. 7. That in all the countries to which reference has been made, juvenile marriage is invariably seen as an attendant upon ignorance and moral debasement, and this without reference to *climate*. 8. That consequently it is allowable to infer that early marriage in oriental countries (which has generally, but without any proof, been ascribed to precocious puberty,) depends solely on the same moral and political causes as produce it elsewhere; more especially as those very causes are well known to exist at present in an aggravated degree in all oriental and intertropical countries.

These conclusions are probably in a great measure true; yet that the commencement of menstruation and of fecundity does bear some relation to the latitude and average temperature, appears to be proved by the following table, in which M. RACIBORSKI gives his results as to the average age at which menstruation commences in different countries and towns:

* Edinburgh Medical and Surgical Journal, October, 1832, and July, 1842.

Name of Town.	Latitude.	Age at first menstruation.	Mid. Temp. of the year.	No of Observations.	Observer.
*Toulon	43°	14-081	15°	43	Marc d'Espence
†Marseilles	43	14-015	15°	25	Ditto.
†Lyons	46	14-492	11-6	160	Bonchacourt.
Paris	49	14-465	18-6	200	Raciborski.
Gottingen	53	16-038	8°	137	Osiander.
Warsaw	52	15-083	9-2	100	Lebrun.
Manchester	53	15-191	9-6	450	Roberton.
Skeen	59	15-450	6°	100	Faye.
Stockholm	59	15-598	5-7	102	Wistrand.
§Swedish Lapland	65	18°			Wretholm.

In general, therefore, the period of puberty is later in nearly the same ratio as the latitude is higher; for each degree of the one the other is retarded about a month and a few days. And the lower the latitude, the more frequent are the examples of precocious appearance of menstruation.

A still more exact relation is between the date of first menstruation and the mean year's temperature; as may be seen by comparing Warsaw and Gottingen, Gottingen and Manchester, &c. M. RACIBORSKI adds that *race* often determines the period of first menstruation. The children of negroes born in England menstruate as early as their parents; those of Europeans born in India as late as their parents. To determine how far circumstances of climate could counteract the influence of race, M. RACIBORSKI obtained information respecting the period of menstruation in Jewesses in Poland, from M. LEBUNE, *medecin-en-chef* of a hospital in Warsaw, and found the mean period in Catholics 15-83, in Jewesses 15-89; (100 observations of each race;) showing that the influence of race remained after ten or more centuries. And in like manner the menstruation ceases sooner in Polish Jewesses than in Slavonian women, lasting in the former on an average 29-23-83 years, and in the latter, 31-6-33 years.

There is a difference also, dependent, probably, on numerous causes, between the women of Paris and those of villages a league and a half or two leagues from Paris, though both have a similar soil, temperature, &c. In the villages the average age at first menstruating is 15-020 years, in Paris 14-465.||

M. RACIBORSKI¶ has also published an account of the age at which menstruation ceases. At Lyons the average age is between 45 and 50; at the Salpetriere, in 100 women, the average was 46-03: at Warsaw, 47-05: at Christiana, 48-07. As a general rule, the great-

* Archiv. Gen. de Med. 1835. † Dict. des Sc. Med. 2me edit. "Menstruation." ‡ Edinb. Med. and Surg. Journ. Oct. 1832.

§ Eighteen years is only a general statement, it should probably be less.

|| A. Raciborski, "De l'Epoque de la Puberte," &c., L'Experience, Juillet 26, 1843, and many subsequent numbers. Numerous facts bearing on this and similar questions may be found in Brierre de Boismont, "De la Menstruation," &c., Paris, 1842. ¶ Medical Gazette, Dec. 9, 1842.

er the number of children born, the longer is the continuation of menstruation; the earlier the commencement of menstruation, the greater the number of children and the later the cessation.

On the Epidemic Intermittance of Intermittent Fever.—The development of Agues in marshy countries is by no means uniform or constant: it is itself subject to intermittences. Thus, at Antwerp and its environs, in 1822 and 1823, these fevers began to become more common and severe than they had been observed to be for some years before. Their intensity increased during the following seasons.

"The periodical genius or type," says M. Gouzzé, "arrived at its acme in 1826, the period of the memorable epidemic of Groningen. During the three summer months of that year, which were remarkable for an almost constant dry heat of from 20° to 28° Reaumur, the number of insidious and malignant remittent fevers was considerable at Antwerp, among all classes of the population. During the month of July, twenty-five, thirty, and even forty fever cases entered the military hospital daily. In 1827, this epidemic constitution, although very decided, was nevertheless not of so great violence; after having suffered a little remission in the following years, it reappeared, and prevailed again with considerable intensity in 1834, 1835, and 1836.

"During this long succession of years, more particularly in the first eight or ten, nothing was so common as marsh cachexias, leucophlegmatic inflammations and engorgements of the spleen. It was not uncommon to meet with invalids in whom the hypertrophied spleen occupied the entire left side down to the pubis. The frequency of malignant fevers at that time obliged the medical men to be constantly on the watch. In 1837, a rapid change took place all at once: the intermittent fevers ceased, and their sudden disappearance coincided with the appearance of a severe epidemic of Influenza, which prevailed from the middle of January to the end of the following month. During the entire prevalence of this new epidemic, we did not meet with a single case of intermittent fever—a circumstance well worthy of notice.

"From 1827 to 1841, that is to say, during an interval of five years, the paroxysmal fevers were so rare, and so slight, that the sulphate of Quinine, formerly the anchor of safety in the majority of cases, had then in a manner fallen into neglect. The malignant remittent fevers, the obstructions of the spleen and the marsh cachexias had also almost entirely disappeared. At last the periodic fevers re-appeared in 1842; and, during the following year, in our localities, they returned to such an extent and often with such gravity as could not fail to arrest the attention of all our practitioners. During the months of August and September of this year, the appearance of a good many cases of pernicious fevers was noted at Antwerp; a circumstance which, for more than six years before, had not been met with in practice."

These variations proceeded, according to our author, from dry prolonged heats, without great agitations of the air, and cold nights.

"In our low and marshy countries," he observes, "it is not, as many physicians believe, the humidity of the atmosphere that occasions the development of intermittent fevers. There is no situation in which fewer paroxysmal fevers are met with when the seasons, in which they generally show themselves, are rainy and damp. If the humidity of the air is necessary to their development, it is in districts not so low as ours, in order to prepare the work of miasmatic decomposition, which it requires other conditions of the atmosphere to complete."—*Jour. Belge.*

REMARK.—From the tone of the preceding observations, our readers will perceive that medical men on the Continent are beginning to pay attention to a subject, connected with the history of diseases, which has been far too much neglected in the present century—we mean the nosological influences of seasons, atmospheric changes and so forth. We need not say that the writings of HIPPOCRATES, SYDENHAM, BAGLIVI, &c. are pregnant with allusions to this matter.—*Med. Chir. Review*, 1844.

Treatment of the Itch in Belgium.—The following circular has been addressed to military surgeons by the Inspector General of the Belgian army.

"Each patient is supplied with an ounce or an ounce and a half of liquid sulphuret of lime in a small pot; this quantity he is to rub carefully and slowly with his hands on every part that is covered with papulæ. If there be any papulæ on the back, another patient is to rub the liquid upon that part. The operation is to be repeated three times in the twenty-four hours, so that each patient consumes three or four ounces of the sulphuret daily. A bath is to be taken every alternate day; the frictions are to be suspended on that day. Fifteen frictions (or ten days use) are usually sufficient for the cure of the disease, if the medical officer in charge sees that the remedy is properly used."

The sulphuret is prepared thus: take of sublimed sulphur 16 pounds, and of quick lime 32 pounds; boil in 80 pounds of water for three-quarters of an hour. Let the mixture rest for some time until it settle, and then let the clear fluid be decanted off. Boil the residue afresh in about the same quantity of water, treat it in a similar manner, and add this decoction to the first. Usually 140 pounds of the sulphuret, at 12° by the areometer, are thus obtained. If the liquid be more dense, it should be lowered to this standard by the addition of rain water.—*Ann. de la Soc. de Med. d'Anvers. Med. Chir. Review.*

We give also Dr. GIBERT's, (one of the Physicians to the St. Louis Hospital, Paris,) prescription for the Itch:—Two parts of sulphur to eight of lard, to which is added twelve grains of the carbonate of potassa for each ounce.—EDITS.

Malaria.—A Reviewer of Dr. M'WILLIAM's "Medical History of the Niger Expedition," in the *Athenæum*, having doubted the existence of Malaria, attributing what are called malarious diseases to other causes, as the "ordinary accidents of climate, heat, and humidity," Dr. M'W. combats the Reviewer's scepticism by a paper in the same journal, for 21st September, 1844.

We suspect that the reviewer had never practised in a tropical or in any malarious climate, else he would not have considered miasmata, malaria, marsh effluvia, or whatever name we may give the poison, as a creature of the imagination. The following quotation from Dr. M'WILLIAM's "reclamation," must be satisfactory to most of our readers, though ten thousand other instances and facts equally stringent might be adduced in proof of a morbid emanation from certain soils, exclusive of heat and moisture.—*Medico-Chirurg. Rev.*

"Heat and moisture are conditions of the atmosphere which readily admit of minute quantitative determination, by methods in common use: and if fever were caused by them alone, in Europeans within the tropics, it should prevail wherever their amount is the same. Now, by reference to the meteorological tables in my work, the temperature and dew point outside the Niger, where no fever occurred, and while in the rivers, were as follows:

	Temp. 3, P. M.	Dew point. 3, P. M.
Passage from Sierra Leone to Accra	81.13	74.93
Outside Niger from 9th to 12th August	79.00	73.70
In the Nun and descending to Aboh	80.60	74.00
At Aboh, Idduh, and the confluence of the Niger and Tehadda to Sept. 21	84.00	73.50
Confluence of Niger and Tehadda to Egga	86.60	72.00

"Thus, though the expedition was exposed from the 1st of July to the beginning of August, to air containing more moisture, and but little inferior in temperature at the hottest part of the day, to any experienced within the river, not a case of fever made its appearance until the 4th of September, three weeks after it had entered the river, and had been exposed to the emanations from the ordinarily recognised sources of malaria. Similar results have been observed elsewhere; in Barbadoes, for instance, no fever occurred among the troops in the garrison, during August, September, or October, 1841, and although in November a very violent description of yellow fever broke out, the temperature of the air was lower than in August, and the dew point lower than in September; their means were as follows:—

	Temp. 3, P. M.	Dew point, 3, P. M.
August	83.77	70.61
September	82.13	73.78
October	82.31	72.67
November	82.83	71.67

"Hence the connection between 'heat and humidity' of the atmosphere and severe remittent, or yellow fever, is by no means so clear as the reviewer would have us suppose. It is, in fact, one of those hasty conclusions which will not stand the test of comparison with observed facts, and could only have been made with a limited view of the history of disease in warm climates.

"At Barbadoes the fever was almost completely confined to one of the regiments composing the garrison, while the other, the men of which were equally exposed to 'heat and humidity,' and performed the same duties with their neighbors, was almost wholly exempt. The cause of the disease in this instance, was very obviously the effluvia arising from a pool of water, immediately to windward of the building occupied by the regiment that suffered.

"But to return to the west coast of Africa. In 1836, H. M. S. *Scout*, under the command of Capt. ROBERT CRAIGIE, proceeded to the west coast; and by a care-

ful observance of the stringent 'General Orders' of the senior officer on the station, 'that no ship was ever to remain in port more than forty-eight hours at any one time,' and that officers were so far as was practicable to avoid entering any of the rivers on the coast,' only two cases of fever occurred in her during the first year, and these were traced to two days' stay at Sierra Leone. In the month of April, 1837, Capt. CRAGIE was obliged to ascend the Bonny river, in the *Scout*, as far as King Peppel's town, for the protection of the British mercantile interests there. On this occasion he also took the *Dolphin*, a brigantine, with him, and left the *Lynx*, another brigantine, anchored at the river's mouth. The *Scout* and *Dolphin* were detained nearly a week at Bonny town, and on leaving the river, fever broke out in both vessels, and their united loss by death amounted to five officers and seventeen men and boys, while on board the *Lynx* not one was even attacked. Bonny town is only about six miles from where the *Lynx* was lying, consequently there could have been very little, if any, difference as to the 'heat and humidity' of the atmosphere in the positions of the vessels that suffered and that which escaped.

"Capt. BRUNSWICK POPHAM commanded the *Pelican*, with a complement of 101 white men, for four years and a half, on the east and west coasts of Africa. During this time, his loss by death amounted to three Europeans. He made it a rule to avoid rivers, his boats having on one occasion only been in the Bonny, and that for a very short time. Capt. POPHAM was on the station during 1835-6-7-8, and part of 39, during which the mortality on the coast is but too well known. In short, it seems to me perfectly clear, from the evidence of many old African cruisers, non-professional as well as professional, and from my own experience, that, as a general rule, a ship will continue healthy on the west coast of Africa, if she is clean internally, and keeps at sea, and that disease will appear if she remains much nearer the shore, or has intercourse with the rivers. If we admit the immunity in the one case, and the occurrence of disease and death in the other, surely the destructive agency must have been owing to something connected with the land, which is acted upon by the same meteoric agencies as the sea, with this difference, that the land and sea breezes become more feeble as we advance into the interior. The sun is mainly effective from below in heating the atmosphere on land and water, both of which absorb its rays and communicate them to the air above. Theoretically, we would expect nothing pernicious to be evolved from the sea, the surface of which is always in a state of greater or lesser agitation; and practically we find the conclusion to be just. On shore, on the contrary, we have all varieties of soil, in many conditions of which we have a right to infer, that gaseous evolutions will take place by the action of heat; and experience but too plainly tells us, that wherever certain conditions are present within the tropics, there, in general, disease is most rife. It will no doubt be said that we have, as yet, no chemical evidence of the existence of malaria. But because its precise nature is unknown to us, are we, in the face of such destructive results, to deny its being? We may just as well say, small-pox and other exanthemata cannot be propagated through the medium of the atmosphere, although the constitution of their poisons has not as yet been recognised by any 'chemist or physiologist.'

"Provided that men have not been for a considerable time exposed to the noxious exhalations within rivers, it seems abundantly evident that their effects are in a great measure counteracted by the air of the open sea.

"In November, 1838, H. M. S. *Pilades*, (a ship remarkable for her general salubrity,) under the command of Captain WILLIAM L. CASTLE, had occasion to be in the Bonny about forty-eight hours; several of her crew were attacked with fever, soon after leaving the river, but they speedily recovered on the passage to Saint Helena, to which island the ship was ordered. Capt. CASTLE has observed similar results in other ships during a long period of service on the west coast.

"From these and numerous other instances, it would appear that the action of miasma is quite analogous to that of other poisons, inasmuch as its injurious effects is in proportion to the amount taken into the system. By remaining long in rivers, the quantity imbibed will be very commonly sufficient to destroy life, while a short stay in such localities will only produce a temporary disorder of the functions."

MEDICAL INTELLIGENCE.

Death of Dr. FERRY, Editor of the New-York Journal of Medicine.—It is with deep regret, that we are thus early in the discharge of our Editorial duties, called upon to record the death of one, who had promised so much to our Profession. Dr. SAMUEL FERRY, the editor of one of the Journals reviewed in another part of this No., was no ordinary man. His position in our Army, and particularly his station at Washington City, though but for a brief period, gave him opportunities, which he industriously improved, and subsequently enabled him to publish in quick succession, a work on the Climate of the United States, Statistical Reports, and many other articles. His last labors with the pen, were crowned by the Prize of the Boylston Medical Committee of Harvard University, on the subject of vaccination and re-vaccination. At the early age of thirty-three, he has been called away from the busy scenes of life and usefulness.

A meeting of the Profession, we see by the papers, was held in the city of New-York, and after the passage of Resolutions appropriate to the melancholy occasion, a committee was appointed to superintend the erection of a monument to his memory, and a gentleman of the profession selected to deliver a public Eulogy on the deceased.

We offer no apology to our readers, for inserting the following interesting letter, from our young and talented friend, Dr. CUMMINS, now of Amoy, (China.) This is an answer to a request to contribute to the pages of the Medical Journals of our country; and we hope in a few months, to be in the regular receipt of valuable articles and information directly from abroad.

"In your letter, you request me to send home accounts of our medical operations. Up to this time there has been so little of order and method in my practice, that I have had few opportunities of observing cases long enough and well enough for description. Of the history of the cases, there is often little or nothing known by the patients. They seem to forget the dates and peculiarities of their disorders with the greatest facility. But as we learn more of the language, this difficulty will be diminished, as we may do much towards refreshing their memories by pertinent questions. As yet, all description must be most general. The most common of all the disorders is Gastralgia (generally complicated with Pyrosis)—of 388 new cases received during February and March, there were 68 of this disease, 13 of simple Indigestion, 9 of simple Pyrosis, making 90 affections of the stomach. Of Coughs (principally Bronchitis) 56, Asthma 15, Rheumatism 17, Pains (from falls, &c.) 18, of affections of the skin 20, and miscellaneous medical cases 23. Of Keratitis 32, Conjunctivitis 25, Blepharitis 18, Opacity of Cornea, 14, Trichiasis 6, Iritis 3, Staphyloma of Iris 3, miscellaneous affections of the Eye 7, (of which one of melanosis)—Eye cases 108; Syphilis 17, other affections of the genital organs 5, Otitis 3, Ulcers 8, miscellaneous medical cases 8. Of all these diseases, the acute inflammations of the eye and the affections of the stomach are most frequently cured. For the former we cup, purge, blister and anoint. I have recently been much pleased with an ointment of Sulphate of copper—I use from 8 gr. to 16 gr. per ounce of lard. For Gastralgias, &c. we have almost a specific in a preparation of pepper 5 parts, and rhubarb 6 parts: we make 133 pills of an ounce of this mixture, and give six pills daily, 2 an hour before each meal; it has done admirably thus far, (nearly two years.) For the Cough, we use Ipecac or Tartar emetic pills, with some success (12 gr.

of the former or 3 of the latter, in twelve doses daily.) Many cases of Asthma are much relieved by Belladonna and Ipecac pills. For Rheumatism we blister and give Dover's powders. For Syphilis, corrosive sublimate pills 1-6 gr. each, beginning with two a day and going on to ten. In cases of Opacity of Cornea, we blow into the eye a mixture of sugar candy and red precipitate, finely powdered—this is done from two to six times daily. In these we are quite successful. Of Hydroceles, we see a great many—I punctured two to-day, but our patients are generally satisfied with having it emptied, go away very much rejoiced and never come back. We have quite a number of miscellaneous surgical cases, such as whitlows, abscesses, wounds (especially among the sailors) bruises, &c. &c.

"I suppose that you have heard that Dr. HERMAN, of the Presbyterian Board, came here in November. He is fast picking up the language, and is a good deal interested in medical matters. We rented two houses in Amoy about the end of the year, and I came over the 19th January. Since the opening of our Dispensary here, we have many more patients than before. Since the beginning of February, Dr. H. and I have had more than 560 new cases, averaging 10 daily—they are also of a more interesting kind than formerly, there being a far larger proportion of acute cases. Our Dispensary consists of a front room 42 by 21, in which the patients are seated, and a back room 18 by 21, in which are our medicines and in which we carry on our operations. We have two Assistants (Chinese servants) who can cup, spread blisters, &c., make pills and help us in many ways. I am desirous of getting three or four youths trained as regular Assistants; with these, we could accomplish far more than at present. My teacher thinks of learning the business. Of medicines we have had a pretty good supply, and we expect that Mr. BOONE will make permanent arrangements on this point. We are even now looking out for a stock just arrived from the United States. We have opened a Hospital also, principally for cases of Cataract. We have room for 50 patients, but have now only eight. If we succeed in our first operations for cataract, I think that we shall have multitudes of cases. What we need is skill, and if we acquire that, we may do a great deal of good. In time, I have no doubt that we shall be able to send home some interesting articles, but it will take considerable additions to my knowledge both of medicine and Chinese, before such memoirs can have much value.

"Our Missionary Medical body in China is increasing in number—A Dr. McCARTER, of New-York, has recently arrived, sent out by the Presbyterian Board, with a Printer. We learn from home, that Mr. BOONE hopes to bring out a number of new Missionaries—they will be welcome, for they are much needed. Dr. McGOWAN, of the Baptist Board, expects to settle at Ningpo—he was there during the winter, and had many patients. As soon as we can have access to the neighboring cities, we shall have an immense field for medical practice; and I think it likely that we should be tolerated where no one else would. Within forty miles from Amoy, there are probably more than three millions of people—How fine a field for medical enterprise! Amoy might be made the central station, from which medicines, &c. could be forwarded from other places. In a few years there will be ample employment for scores of physicians. And if we hope to raise up men among the Chinese to practice the healing art, we cannot expect that three or four teachers, having their hands full of work, will be able to do much. If those Christians who complain that they can find nothing to do as physicians at home, would come hither, their complaints would soon cease. And for men anxious to learn, here is a fine opportunity. If we had the funds for a large hospital, we could easily keep it full. By feeding the patients, we could keep them as long as we desired, and by judicious selection we could soon beat any hospital in Europe, for we have a population around us, and an absence of competition which would draw hither all, of medical importance for many leagues in the interior, so that La Charite and L'Hotel Dieu of Paris, would be completely eclipsed. May that day come."

✂ Subscribers to the *Southern Medical and Surgical Journal*, will recognise in this, (with the old series) the commencement of the 4th Vol. and of the whole Nos. the 37th.

SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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[No. 2.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Remarks on the Pathology and Treatment of Convulsions. By
L. A. DUGAS, M. D., *Professor of Physiology and Pathological*
Anatomy, in the Medical College of Georgia.

The announcement by M. TROUSSEAU of a new method of arresting Convulsions,* furnished me with an opportunity of making a few remarks on the Pathology of those affections, in the second volume of the Southern Medical and Surgical Journal, p. 546, published in 1838. The following article is designed as an extension of the views then presented.

The term Convulsion, in its most extended sense, has been applied to all morbid contractions of the muscular fibre. Thus considered, it comprehends all the degrees of disordered action to be found between the two extremes of mere tremor and permanent contraction. And, were the etymology of the term not adverse to this acceptation, there would be a manifest convenience in its adoption, for, as will be seen in the sequel, all these degrees of disordered action, may be regarded as mere manifestations of as many degrees of the same condition of the nervous system, or rather of innervation. Being, however, in possession of no term adequate to the expression of all these phe-

* Journal des Connaissances Médico-Chirurgicales, 1837.

nomena, and, looking to the true import of the word Convulsion, it should be restricted to designate *all abnormal series of alternate contractions and relaxations of the muscular fibre*. It is in this sense we shall use it.

Distinctive appellatives have been assigned to convulsions, according to the various circumstances under which they may occur; hence we have convulsions termed infantile, puerperal, hysterical, epileptic, hydrophobic, &c. It is evident, however, from our definition, that we comprehend under the denomination of convulsions, *all abnormal series of alternate contractions and relaxations*, without regard to the number of muscular fibres implicated, nor to the degree of violence with which they are affected. We therefore recognize as convulsions, *local* as well as *general* contractions, and tremors as well as epilepsy. Indeed, when examined with the lights furnished by modern physiology, they are, as already remarked, really but different degrees of the same modification of innervation.

Of the classifications of the affections of the motor system proposed by the several Nosologists, that of SAUVAGES appears the least objectionable. I will therefore insert it here for the purpose of subsequent reference, and offer one of my own, in which it is simply attempted to supply the deficiencies of that of this distinguished Nosologist.

CLASSIFICATION BY SAUVAGES.

4th Class—Spasms.

1st Order—Partial tonic spasms.	Pandiculation.
Strabismus.	Apomytosis.
Trismus.	Trembling.
Wry-neck.	Palpitations.
Muscular stiff-joint.	Claudication.
Cramp.	4th Order—General Clonic spasms.
Priapism.	Rigor.
2d Order—General tonic spasms.	Eclampsia.
Tetanus.	Epilepsy.
Catalepsy.	Hysteria.
3d Order—Partial Clonic spasms.	Chorea.
Nystagmus.	Beribery.
Carphology.	

CLASSIFICATION BY L. A. DUGAS.

Affections of the Motor System.

1st Order—Partial Tonic spasms.	of small intestines.
Strabismus.	" large intestines.
Trismus.	" rectum.
Wry-neck.	" urinary bladder.
Muscular stiff-joint.	" uterus.
Priapism.	" gall bladder.
Cramp,	" heart.
of voluntary muscles.	" diaphragm.
" stomach.	

2d Order—General Tonic spasms.Tetanus.
Catalepsy.**3d Order**—Partial Clonic spasms.Nystagmus.
Carphology.
Gaping.
Palpitations.
Claudication.
Subsultus tendinum.
Twitching of facial muscles.
Stammering.
Hiccough.
Sneezing.
Pertussis.
Vomiting.
Spasmodic croup.
Spasmodic asthma.
Laughing.**4th Order**—GeneralSobbing.
Sighing.
Coughing.
Abortion.
Grinding the teeth.
Clonic spasms.
Shudder.
Rigor.
Trembling.
Jactitation.
Chorea.
Shaking Palsy.
Raphania.
Beribery.
Eclampsia.
infantile,
hysterical,
puerperal,
hydrophobic,
epileptic.

The causes of convulsions may with great propriety be divided into the predisposing and exciting. The former are either congenital or acquired. That the congenital predisposition to convulsions may be hereditary does not admit of a doubt, as the observation of all practitioners will attest. No children are so subject to these affections as those born of parents similarly predisposed; hence the offsprings of hysterical mothers are singularly prone to convulsions. There are many instances of this peculiarity being transmitted to several successive generations, and of mothers, all of whose children have fallen victims to it. The congenital predisposition is, however, not always the effect of hereditary transmission, for it is not uncommon to find children extremely susceptible to convulsions, when no such susceptibility could be recognized in their parents. The undue preponderance of the nervous system, and a general deficiency of tonicity or stamina may usually be observed in such individuals. According to JOLLY,* "all the physiological and pathological conditions that increase the susceptibility of the brain to respond to external irritations, are efficient causes of convulsions." BAUMES, who has certainly written the best practical work on infantile convulsions, holds the following language:† "The mobility of the system is in a direct ratio with the feebleness, laxity and delicacy of the various parts of the living body. Upon these evident peculiarities depend the extreme reaction

* Dict. de Méd. et de chir. Pratiques, art. convulsions.

† Translated from p. 21 of the "Traité des convulsions dans l'enfance, par M. Baumes. 2me. édition. Paris, 1805.

of the sensorium, the great susceptibility of the nerves, and the undue mobility of the muscles." It is to this mobility of the system, consequent on the deficient powers of resistance peculiar to all newly formed tissues, that we may refer the greater susceptibility of children than adults to convulsions, and, in proportion to the difference between the full development of energy and stamina in the male and female adult, will be found the disposition to such disorders. Females are, in general, therefore, more subject to them than males; and those reared under the enervating influence of city life, of sedentary habits, &c. still more so.

It has been remarked, that it is during the period of the evolution of the body, when new tissues are being formed, that the system presents the greatest degree of susceptibility, and is therefore most liable to convulsions. This is no doubt correct; but it is also urged by some that in females this period may be said to continue much longer than in males, inasmuch as even after the full development of her own system, the formation of new tissues is continued in the production of new beings—in the evolution of the *fœtus* in utero. This, however, can scarcely be adduced as a reason of their greater aptitude to convulsions, for it is to the imperfect solidification or tonicity of newly formed tissues, especially the nervous, that this aptitude should be attributed, and not to the *act* of formation. At the same time that the mother contributes the elements of new tissues to her offspring, her own tissues cannot be said to undergo any special modification, save in the uterus. Unless, therefore, the mere development of the uterus under impregnation be regarded as a process of evolution, similar to that of growth, the argument cannot be valid. Yet it is true, that females are more subject to convulsions during pregnancy than during any other portion of their adult life, and that they cease to be so after the cessation of child-bearing. It is a remarkable fact that the disposition to convulsive affections decreases rapidly after this period, and that the aged of both sexes scarcely ever suffer from them—BAUMES says they never do.*

The predisposition to convulsions may be *acquired* by any train of circumstances calculated to retard or to impair the solidification and perfection of the tissues, and, consequently, the acquisition of strength and stamina. Acute and chronic diseases, atmospheric vicissitudes, insufficient or unwholesome food and raiment, deficient ventilation,

* Op. cit. p. 19.

want of exercise, &c. are among the most common causes of this acquired habit.

The exciting causes are as numerous as the agents capable of disturbing the function of innervation. These might, according to HIPPOCRATES, be summed up under the head of repletion and depletion. Thus: "*Convulsio fit, aut à repletione, aut ab depletione.*"* To which GALEN, in commenting on this aphorism, very properly adds irritation. Convulsions, however, occur under circumstances that cannot be referred to either of these heads. They may be occasioned, for example, by peculiar odors, musical or harsh sounds, affecting sights, &c.; nay, even by the workings of imagination, as was strikingly exemplified by the fanatical sect of Convulsionists of St. Medard, who, in their meetings, frequently went into violent convulsions. Indeed the same may be occasionally seen in our own time and country under a somewhat similar state of the mind.

But direct or indirect irritation of the nervous system is by far the most common exciting cause of convulsions. In using the term *irritation*, it may be well to state that we do not thereby wish to designate one of the stages of inflammation, but merely an impression which, when perceived, is followed by a perturbation of some of the acts of the economy. Now, whilst sensations are usually but the perception of impressions made on the tissues by some mechanical or physical agent, there are sensations developed within the system independently of any antecedent impression that we can detect.—Hence, the latter are denominated internal sensations, and their cause is said to be physiological or functional. Let the nostrils be titilated by a feather, the mechanical irritation is immediately perceived, or a sensation is produced, and this is followed by a sudden, convulsive action of certain muscles, constituting sneezing. The convulsions will then intermit and return again, until the cause of irritation be removed. Yet sneezing will as effectually be produced by the irritation of the lining membrane of the nostrils consequent on a modification of its capillary circulation, as occurs in commencing coryza. Here we have an instance of internal or functional sensation, the irritation being independent of any mechanical or physical impression. In like manner, vomiting may be excited by irritating the fauces, and by functional disorder of the stomach; laughing may be the effect of tickling or of a physiological condi-

* Aphor. 39 sec. vi.

tion of the brain, or of the morbid state of the system termed hysteria. What is true in those cases, is equally so with regard to more violent convulsions. These may likewise be occasioned by mechanical and by functional irritations, by the pressure of a tooth making its way through the gums, by the presence of indigestible food in the stomach, by worms in the intestines, as well as by spontaneous gastric or intestinal irritation. Traumatic causes as well as occult ones, will induce epileptic convulsions; and intermittent fever, in which there is always more or less spinal irritation, may be attended by all the grades of convulsion, from the tremors of the cold stage to the most violent eclampsia. It is a singular fact that the violence of convulsions is by no means in a direct ratio to the violence of the apparent irritation, the slightest wounds occasionally giving rise to violent tetanus, and lesions so mild as to escape detection, causing epilepsy and eclampsia.

The tendency of the age is to the localization of maladies, and whilst we would be among the foremost in acknowledging the immense benefits which have accrued to the science of medicine by this course, we must confess that in the study of convulsions it has rather misled certain authorities, otherwise entitled to much respect. The chief purpose of BRACHET, in the preparation of his valuable monograph on infantile convulsions,* appears to have been the demonstration of the existence of lesions in the brain, and especially of its meninges in the great majority of convulsive affections. Among the various authorities he invokes in support of his views, we find PORTAL, who, in summing up the lesions of the encéphalon, detected in cases in which convulsions had occurred,† enumerates 1st, the collection of air, water and gelatinous matter; 2d, congestion of the blood-vessels or sanguineous effusions; 3d, engorgements composed of various substances; 4th, inflammation; 5th, induration; 6th, abscesses; 7th, ulcers; 8th, wounds; 9th, foreign bodies; 10th, increased or diminished volume; 11th, change of color, &c. But PORTAL takes care to remark that those lesions are not peculiar to convulsions. BRACHET also cites a number of cases from MORGAGNI,‡ LALLEMAND,|| ABRECRONBIE § ANDRAL,¶ &c., in many of which it is by no means demonstrated that the lesions were not rather the effect than the

* *Traité Prat. des Convuls. dans l'enfance*, par J. L. Brachet, 2me. éd. Paris, 1837. † *Archiv. Médicale*. T. iv. p. 69 et seq.

‡ *De morbis et causis morbi*. Tome I. epist. x. || *Lettres sur l'encéphale*.

§ *Diseases of the Brain*, &c. ¶ *Clinique Médicale*.

cause of the convulsions. The congestions and effusions, for instance, so frequently found in post-mortem examinations, may assuredly be the *effect* of the convulsions, inasmuch as these, when violent, always produce intense congestion of the organs contained in the cranium and spinal column. So far then from considering these lesions as the cause of the convulsions, we should expect to find them as a necessary consequence of such disorders. That the inference drawn from these cases is not always legitimate, will appear from the first of the series he adduces. It is taken from MORGAENI, and is as follows :

"Obs. xlvii. A girl five months old was taken with fever and looseness of the bowels. The following day the fever alone persisted. The third day she was seized with strong chronic convulsions of the upper extremities, extending with less intensity to the muscles posterior to the chest, and still less to the glutei muscles. Towards the end of the fifth day, the convulsions diminished, were manifested only at intervals, and were entirely suspended when the child slept. Universal jaundice now supervened.

"After-death, the entire surface, but especially that of the back, presented dark red blotches. In the abdomen, nothing remarkable was discovered, save that the rectum was of a black color. The pericardium was filled with yellow fluid; the right ventricle of the heart contained polypous concretions which extended into the pulmonary artery, and which resembled concrete mucus. The blood every where else was liquid, but slowly coagulated when exposed to the air. Within the cranium all was natural, with the exception of a serous humour found between the dura mater and pia mater, and which had formed concretions around the blood vessels, in the form of gelatine."

In this case, BRACHET thinks the convulsions were manifestly caused by meningitis. Was there not also in this case intense disorder of the rectum and of the biliary apparatus? Was there not an effusion in the pericardium as well as in the cranium? And if effusions, (as our author seems to think, but to which we cannot accede,) be indicative of irritation, why not admit it also to have existed in the pericardium as well as in the meninges?

If it be borne in mind that BRACHET derives almost all his cases from special works on diseases of the brain, the following passage will no longer excite surprise: * "I will not quote a greater number

* Translated from op. cit. p. 345.

of autopsic examinations. Had I added even many more, the result would have been the same. They would all have presented the same lesions: congestions, inflammations, abscesses, membranous or gelatinous productions, tubercles, hydatids, osseous deposits, &c." Yet he unwittingly exposes the bias under which MORGAGNI's cases were drawn up in the following paragraph:* "This celebrated author (Morgagni) is so well convinced that convulsions depend on meningeal irritation, that, wherever he does not discover traces of inflammation, he considers as a sufficient cause of irritation the small quantity of serous matter found in the ventricles, and announces that we are not to judge of irritating causes by their quantity, but by their power, and finally admits that this serous matter possesses an acrid irritating property."

Believing convulsions to be symptoms and not special diseases, the only advantage we can perceive in these attempts to localize it, is the collection of facts that may be used to establish the relative proportions of the various exciting causes of those phenomena. The predisposition to convulsions might we think be regarded with much more propriety as a special disease than the exciting causes, for without that condition of the system, the same irritation will not excite convulsions.

Let us now analyze the phenomena presented during a paroxysm of convulsions, and in order to do so the more effectually, let us select hysterical eclampsia, or epilepsy. The individual is, to all appearances, in the enjoyment of perfect health, when more or less suddenly, he falls to the ground with violent, though intermittent, contractions of all the muscles of animal life, and with loss of consciousness. I say with loss of consciousness, rather because such appears to be the case, than from a settled conviction that consciousness is abolished at the onset of the attack. The mere facts that the patient cannot then manifest consciousness, nor remember after the paroxysm, what has occurred, should not satisfy us on this point, inasmuch as, in the first place, he has lost the control of the organs (the muscles) by which he could express consciousness, and in the second we have continually instances in which circumstances taking place without any apparent deterioration of this faculty, are not remembered a short time afterwards. Be this as it may—at the onset of a paroxysm of epilepsy, the patient soon passes into a state of stupor, with

* Op. cit. p. 329.

stertorous breathing, full, strong and slow pulse, congestion of the superficial veins and complete relaxation of the muscles. He is then unquestionably unconscious, and will remain so until the equilibrium of the circulation be restored. Frothing at the mouth, symptoms of asphyxia, priapism, defecation, &c. may occur or not during the convulsion, according to the intensity of action in special muscles. If, at the moment the contractions cease, the case were seen by one unapprised of the antecedents, it would certainly be regarded as presenting all the characteristics of apoplexy, viz. loss of consciousness, stertorous breathing, perfect relaxation of muscles, and full, strong and slow pulse. The stupor gradually subsides, the patient breathes better, begins to swallow his saliva, groans, turns over or changes his position, and finally opens his eyes and asks the by-standers, what is the matter? He is again a well man, with the exception of the lassitude consequent on the violent exertions, but which soon wears off. Such is, however, not the termination of all cases of convulsions. It not unfrequently occurs that as the stupor diminishes and consciousness returns, the patient will open his eyes, look about as though intending to speak, and immediately be again seized with convulsions as before; or the return of the convulsions may take place after the complete restoration of intellect and voluntary motions, even after all traces of the former attack had disappeared; or they may terminate fatally.

We have then, manifestly, in violent general convulsions, regardless of their cause, two distinct stages or conditions of the system—the one a state of violent muscular action, and the other of total muscular relaxation—the one a state of high excitement, and the other of torpor. Now, whence this change? Is the nervous system, or innervation in the same condition during these two stages? Certainly not. Can the same cause produce, directly, effects so opposite? I apprehend not. The explanation is found in the old maxim, that *irritation causes convulsions, and compression paralysis*. Whatever be the immediate cause of the first stage of the paroxysm, the phenomena are those that pertain exclusively to disordered innervation, to a modification of the functions of the nervous system that may be induced by various agents, mechanical, chemical, or physiological, acting in almost any portion of the system. That it is only through the intervention of certain portions of nervous system that such phenomena can be developed, will be subsequently shown. The violent contractions then may be

assigned to a modification in the supply of nervous influence to the muscles affected. But we have seen that violent and general convulsions are invariably attended by a stage of stupor, stertorous breathing, relaxed muscles, &c. This, the second, or the apoplectic stage, comes on more or less early in the attack, according to its intensity, usually in from 2 to 5 minutes. The more violent and general the convulsions, the sooner will the second stage ensue, and consequently the sooner will the paroxysm be terminated; whereas, if the convulsions be slight, less intense or partial, the apoplectic stage of stupor may be much longer in coming on, or may not follow at all. In such cases the continuance of the convulsions varies from a few minutes to hours, and even days. Partial convulsions or such as affect only a portion of the body, are those which usually continue the greatest length of time, and are very rarely attended with unconsciousness—never with the apoplectic state. Let me not be misunderstood: I am aware that in certain cases of Eclampsia and even of Epilepsy, followed by the stage of stupor, or apoplectic stage, it would appear that there is but one side of the body affected. Such however is not strictly true in such cases, for, although the muscles of one side are more violently agitated than those of the other, these are by no means in a state of relaxation, but will generally be found quite rigid. I repeat, if one side only is affected, the other being in a *normal* state, there will be no apoplectic stage and the convulsions will continue for an indefinite time. These remarks recall to my memory a case I witnessed about two years since, in which the lady's entire right side, including the right side of the face, was affected with strong convulsions for several hours, without being followed by stupor nor attended with impaired intellect. Indeed she retained the power of speech and deglutition during the whole time, crying out for relief and swallowing readily the remedies presented her. Cases more or less similar to this are by no means unfrequent among hysterical females.

If it be now asked why the apoplectic stage occurs in *general* and not in *partial* convulsions, the solution is quite easy. Examine for a moment how the circulation is affected under these circumstances. It will be seen at once that whenever the muscles are violently convulsed, the blood contained in the muscular as well as intermuscular veins must be forcibly driven out and accumulated in those veins so situated as to be exempted from the compression. These are found in the surface of the body and within the cavities of the chest, spine

and head, and observation demonstrates that the organs of the chest, spine and head are precisely those that suffer the greatest degree of congestion under such circumstances. Again, the act of respiration is materially impeded by the fact alone of its muscles and those of the larynx being affected. This impediment then, taken in connection with the congestion determined as remarked above, will account sufficiently for the deficient aeration of the blood, and for the symptoms of asphyxia presented during violent general convulsions. It is well known that asphyxia is always attended with congestion of the nervous centres; so that we have here two conditions of the system, each tending strongly to accumulate blood in organs contained within unyielding walls, and consequently where no such accumulation can take place without compression of the soft pulpy material of said organs. The nervous centres are really and truly compressed in this manner, until their faculty of perception as well as that of dispensing nervous influence be materially diminished or even irretrievably destroyed. If these faculties are merely diminished, so that neither the cause of the convulsion can be perceived or give offence, nor the muscles be supplied with nervous power to contract, the convulsions will cease, and consciousness will gradually return as the congestion subsides. If the cause of the convulsion still continues, however, the return of consciousness will be attended with a return of convulsions—thus constituting the alternations of convulsive action, apoplectic stupor, recovery and relapse already described. But if those faculties be entirely abolished, death will be the necessary consequence.

In cases of slight or partial convulsions the phenomena of congestion above recited must necessarily be correspondingly slight or partial. Hence the nervous centres retain the perceptive and dispensing faculties—the cause of convulsion continuing to act, continues to give offence to the nervous sensibilities, and innervation continues deranged. There are certainly many instances in which the cause of the convulsion not being apparent, we cannot perceive that it has been removed, and yet the convulsion ceases. May we not admit that the perturbation of the circulation consequent on convulsions may, of itself, so modify irritation or its cause as to lessen its intensity or bad effects? Many of our most efficient remedial agents act in this way. The warm bath, cold affusion, diffusible stimuli, &c. may be regarded as modifying the capillary and general circulation. Emetics, even in hysteria, and other cases in which the stomach cannot be considered the seat of irritation, constitute one of our

most effective means of arresting convulsions, and, doubtless, afford relief by the great perturbation of the circulation occasioned by the act of vomiting.

The study of the pathology of convulsive affections demands an acquaintance with the physiology of the organs implicated. These organs are the muscles and those portions of the nervous system by which they are supplied with nervous influence. The muscles themselves, being inert when cut off from the influence of the nervous system, it becomes highly important to determine the laws and circumstances under which such influence is manifested. These have of late years been studied with great success by MAGENDIE, FLOUR-ENS, Sir CHARLES BELL and MARSHALL HALL, and the conclusions to be deduced from their researches will be very briefly stated. The nervous system is now divided into three very distinct and well defined portions; the brain, the spinal marrow, and the ganglionic system; and to each of these portions, very distinct functions are assigned. The brain is the seat of perception or sensation, of volition, and of the mental faculties; the spinal marrow is both a medium of communication with the brain, and an independent excito-motory apparatus; the ganglionic system presides over the functions of organic life, as nutrition, formation, secretion, &c. To the brain then must be referred all the abnormal conditions of sensation, of volition, and of mind—pain as well as paralysis, perversions as well as loss of the will, mental aberrations as well as idiocy. Lesions of the senses, acts of violence, insanity,—all have their origin distinctly in the brain. Vivisections clearly demonstrate that injuries inflicted on the brain, induce neither pain nor muscular contractions, and, consequently that this organ is endowed with neither sensibility nor the *vis nervosa* of Haller. But when the brain is irritated, delirium ensues, when it is compressed coma follows, and when destroyed paralysis or loss of voluntary motion is the consequence. According to Dr. M. HALL, if other phenomena accompany diseases of the encephalon, they arise from the extension of the influence of these to the true spinal and ganglionic systems, through *irritation or pressure, counter-irritation or counter-pressure*. Let us here be permitted to quote the learned Doctor's own words on this interesting portion of our subject:*

* Mem. on some Principles of Pathology of the Nervous system.

"M. Andral speaks of *irritation* of the *cerebrum* as the cause of abnormal muscular contractions. Now, in our investigations into the nature of cerebral diseases, we must remember one circumstance; it is impossible to induce muscular action by any irritation of the substance of the cerebrum itself. Whenever, therefore, there are spasmodic affections in diseases of the nervous system, we *must* conclude that the *spinal* system is involved, either primarily or secondarily, in the disease. Irritation of the cerebrum may induce delirium and other disorders of the cerebral functions; congestion of the cerebrum may induce coma, paralysis, &c. But if these morbid conditions of the brain be attended by spasmodic or other deranged actions, it is because the true-spinal system is involved in the disease, or affected by it in the way of irritation, counter-irritation, or of pressure, or counter-pressure. Hence we observe the symptoms of spasm in various diseases of the encephalon, the condition being not the nature of the disease, but that they produce these intermediate effects. Time, as is well known, is a very important element in this problem; and why is it so? The fact is to be explained on the same principles. The very same lesion occurring quickly, will produce effects which will be totally absent if it creep on slowly. In the former case, we have the effects of irritation and pressure, or of counter-irritation and counter-pressure; in the latter, the cerebrum has so accommodated itself to the new state of things, probably by the altered condition of its vessels, as to avoid these effects, except towards the close of the disease.

"We need not, therefore, now view with surprise the fact that the same lesions as found *post-mortem*, had been attended by a totally different series of symptoms during life, any more than the other fact that, in the different *periods* of that lesion, the symptoms have been different.

"The symptoms frequently subside too and re-appear. If the disease be not regularly progressive, the encephalon accommodates itself as I have stated, and the symptoms disappear; if now the disease proceeds, the symptoms also return. At least all this *may* be.

"A rapid effusion of serum may resemble hæmorrhage or ramolissement in its effects; or slow effusion may merely obscure the intellectual faculties." 105.

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"It is well known from the experiments of M. Flourens especially, that irritation of the cerebrum has no influence in inducing spasmodic action. Whenever, therefore, spasmodic symptoms occur in diseases of the cerebrum, it must, as I have already stated, be on a principle different from that of irritation of the cerebrum itself; it must be from an impression made upon parts of the nervous system in which the property of exciting spasmodic action on being subjected to irritation resides; these parts are the tubercula quadrigemina, the medulla oblongata, the intra-cranial nerves, &c.

"That *undue* counter-pressure on the medulla oblongata may, and

actually does, excite convulsions, is proved by the following facts:— In the interesting case, most anxiously watched and accurately detailed to me by my friend Mr. Toogood, of Bridgewater, of his own little girl, aged thirteen months, the croup-like convulsions occurred repeatedly, until one day, when the bones of the cranium separated, and the convulsion ceased. In a case of spina-bifida, related to me by Mr. Herbert Evans, of Hampstead, there was a croup-like convulsion whenever the little patient turned so as to press upon the tumour. In the case of an anencephalous foetus, described by Mr. Lawrence, convulsion was produced on pressing on the medulla oblongata. In a case of meningitis, given by Dr. Abercrombie, the anterior fontanelle became very prominent. Pressure upon it induced convulsion. Hypertrophy of the brain affords an argument of the same kind: it induces convulsion, *except* in the case in which the cranium grows with the encephalon. These and other facts lead me to think that convulsion arising from cerebral disease is thus to be explained." 107.

We have stated that the spinal marrow is a medium of communication with the brain, and an independent excito-motory apparatus. That it is a medium of communication with the brain, is easily shown by sections of this cord, which deprive all the parts receiving nerves from below the section, of the influence of sensation and volition, and consequently of *voluntary* contraction. Yet contractility is not annihilated by such sections, in these parts—contractions may still be *excited* by irritating causes applied to the nerves, or directly to the spinal marrow. Hence the theory of the excito-motory process so happily developed by MARSHALL HALL. His views may be gleaned from the following paragraph:

"A peculiar set of nerves constitute, with the true-spinal marrow as their *axis*, the second subdivision of the nervous system. As those of the former subdivision (the brain) were distinguished into sentient and voluntary, these may be distinguished into the *excitor* and *motory*. The first, or the excitor nerves, pursue their course principally from *internal* surfaces, characterized by peculiar excitabilities, to the true medulla oblongata and spinalis;* the second, or the motor nerves, pursue a reflex course *from* that medulla to muscles having peculiar actions concerned principally in ingestion and egestion. The motions connected with the former, or cerebral subdivi-

* Dr. Hall includes the tubercula quadrigemina in the true-spinal system. He regards as excitor nerves of this system, the fifth, the pneumogastric, and the posterior spinal nerves; and as reflex or motor nerves, the fourth, sixth, portion dura of the seventh, the pneumogastric, the spinal accessory, the phrenic, the inferior external respiratory, and the spinal nerves. (Op. cit.)

sion, are sometimes, nay, frequently, *spontaneous*: those connected with the true-spinal are, I believe, *always excited*.”*

The muscles of voluntary motion then contract under the mandates of volition emanating from the brain, and also under the influence of irritation direct or indirect of the spinal marrow, and this whether the communication of their nerves with the brain be cut off or not,—whether sensation be developed or not. Nothing is more common than to find a limb so paralyzed as not to move in the least under the strongest efforts of will, and yet be affected with more or less violent contractions when a feather is passed over its surface, or it is otherwise irritated. In such cases, as has been justly remarked by MARSHALL HALL, the seat of the lesion must be that of volition—the brain; for the persistence of the reflex actions indicate an unimpaired condition of the seat of involuntary motions—the spinal system. If on the contrary it be found impossible to *excite* motions in the paralyzed limb, the lesion should be referred to the spinal system. This is an important means of diagnosis.

Seeing that voluntary movements emanate alone from the brain, independently of excitement or irritation properly so called, and that all involuntary movements are manifestly produced by mechanical, physical, or functional excitement or irritation, the true pathology of convulsions is perfectly plain. Convulsive contractions are involuntary—therefore not produced by the organ presiding over the functions of volition, but by that organ which presides over motions susceptible of being excited by stimuli other than that of volition. Excite the nostrils, or the fauces, or the anus, and, despite of the efforts of the will, sneezing, vomiting, or contraction of the sphincter ani will ensue, and these sequences will obtain whether the irritation have been perceived by the brain or not, as may be demonstrated in vivisections in lower animals and in cases of paraplegia and hemiplegia in man. If such things take place in localities exposed to our view, there is no reason why they should not in those more deep seated or hidden.

In the physiological or healthy state of the system, these phenomena of reflex action are essential to the normal performance of the acts of the economy. It is only when they occur under the influence of a pathological state of the system that they constitute convulsions. In

* Lectures on the Nervous System and its Diseases, by M. Hall. London, 1836.

idiopathic convulsions the lesion is in the centre of the true spinal system—and in sympathetic convulsions at its periphery. In the former, the movements take place without the intervention of the excitor nerves; in the latter they result from irritation transmitted by these excitors to the centre. To the former class may be referred the trembling of the cold stage of intermittent fever, chorea, carphology, claudication, &c. and sometimes hysteria, epilepsy, &c.; whilst to the latter class belong traumatic tetanus, and the great majority of the convulsions thrown under the head of eclampsia in the classification we have proposed, as the infantile, puerperal, hydrophobic, &c.

"Tetanus," says Dr. HALL,* "is, in every respect, the most unequivocal example of an affection of the true-spinal marrow, through an incident and the motor nerves. All the functions of this subdivision of the nervous system are affected in the most violent form, whilst the cerebral functions are unaffected: the dyspnoea, the dysphagia, the constipation, the trismus, the emprosthotonos, the opisthotonos, the extreme susceptibility to causes of physical impression and agitation, and of mental emotion,—all mark an affection of the true-spinal system; whilst the freedom from all affections of the senses and of the intellect, the absence at once of delirium and of coma, denote the normal condition of the cerebral system. Hydrophobia is in the same category."

Again, according to Dr. HALL, "in Epilepsy the very first symptom is generally, if not always, one of the true-spinal kind. The first symptom is constriction about the throat, and closure of the larynx, more or less complete; then follow violent expiratory efforts and convulsive movements of the trunk and limbs. Intermediately, and even without the convulsive movements, the cerebrum is affected with congestion, and a multitude of cerebral symptoms occur: flashes of light; tinnitus aurium, the aura epileptica; a momentary oblivion; a state of terror, of delirium, or of unconsciousness, &c; as *parts* of the general convulsion, the tongue is protruded and bitten, the fæces, the urine, or the semen expelled; as *consequences* of that convulsion, the cerebrum is congested, and there is coma. If this state continues, another order of symptoms takes place; the respiration becomes stertorous, and, at length, affected with mucous rattle, the true spinal and ganglionic systems becoming fatally involved in the disease.

"It is the constriction about the throat which assimilates epilepsy to the state of things which exists in *strangulation*, and which distin-

* Memoirs on some principles of Pathology in the Nervous System, by M. Hall, noticed in the Medico-Chirurgical Review—January, 1842.

guishes it from hysteria. It is this circumstance which associates epilepsy with the crowing inspiration of the convulsions of children; all are *laryngismal*. In epilepsy, there is sometimes a crowing inspiration and convulsion of infants are sometimes followed by epilepsy in subsequent years."

Shall we be told now that convulsive affections are for the most part to be referred to lesions of the brain or of its meninges? that congestion of the brain and effusion are among the most efficient causes of convulsions? that involuntary movements emanate from the organ of volition? It is evident that those who entertain such views have mistaken the effect for the cause, in not duly attending to the order in which are developed the several phenomena-presented before, during, and after a convulsive paroxysm.

The main object of this communication has been to elucidate the true character of such affections, in order that correct views of treatment might be attained. If in certain cases the origin of the perverted movements must be traced to the centre of the true-spinal system, whilst in certain others it must be found at the periphery of this system, all that is necessary will be to distinguish these cases from each other, and to localize the peripheral portion affected. If the excitation proceed from the gums, the indication is plain; if from the stomach, the intestines, the cutaneous surface, or even the encephalon, it is equally so. There can be no difficulty in the matter, once that the true nature of the case is ascertained. Each case should be treated on its own merits—due regard being paid to the *consequences* as well as to the *cause* of the convulsions. But there can be no question that the same degree of local irritation that will occasion convulsions in one individual, or at one time, will not have the same effect in another individual, or at another time. Hence, as has been already stated, there is a convulsive predisposition sometimes existing in the system, that must be combatted as well as the paroxysm itself and its effects. The treatment of convulsive diseases should therefore be directed against this predisposition, against the immediate cause of the paroxysm, and against the effects of the convulsive struggles.

To the predisposition must be opposed all the means calculated to increase the solidification of the tissues and the stamina of the system. Tonics, especially the anti-spasmodic tonics, wholesome diet, exercise, change of scene, diversion, regular habits, &c. will accomplish these purposes. The predisposition being known to exist, due atten-

tion must be paid to the condition of the localities from which excitation most frequently proceeds; and these will vary according to the age and sex of the individual. In children, they are the gums, the stomach, the bowels, the encephalon; in adult females, the uterus. These localities should therefore be maintained, as far as practicable, in a state of integrity.

Should an attack nevertheless supervene, it must be treated according to the seat and nature of the exciting cause. Lancing the gums, emetics, cathartics, enemata, anthelmintics, emmenagogues, warm bath, revulsives, &c. will furnish us the means most generally needed. During the paroxysm of violent general convulsions very little can be done to moderate its intensity; the supervention of cerebro-spinal congestion will of itself arrest it. But the paroxysm of partial or of mild convulsions, may be mitigated, and the threatened return of violent ones prevented, by the use of the above means, and also, according to the suggestion of Dr. HALL, by titillating the fauces and the nostrils, and by dashing cold water in the face, so as to modify the condition of the respiratory muscles; inspiration, &c. being provoked by such impressions.

The *effects* of the convulsive struggles should not be overlooked. The most formidable are cerebro-spinal compression from congestion or effusion, and asphyxia from accumulated mucus in the bronchi, or from constriction of the rima glottidis. The means instituted to arrest the bad effects of the former must be proportioned to its intensity. Knowing that congestion is the necessary consequence of violent convulsions, and that it usually subsides, more or less early after the cessation of the struggles, without leaving any bad effects, we should not too hastily resort to depletion. The abstraction of a portion of the circulating mass should be reserved for those cases in which it may be deemed requisite for the removal of the exciting cause, or for the moderation of the determination to the cerebro-spinal centres. Now it is exceedingly rare that the exciting cause is such as to require *active* depletion, if any; and I believe it perhaps equally rare that the congestion is such as to excuse the profuse waste of blood advised by most practitioners. The expediency of blood-letting, and the quantity to be taken, should be determined by the antecedent, as well as the actual condition of the circulation. If the exciting cause of the paroxysm, and the general state of the system, would not have warranted the abstraction of blood *before* the paroxysm, such abstraction can certainly be tolerated during or after the paroxysm, only in

so far as it may be imperatively called for by the violence of the congestion of the nervous centres. How often have not children, (at which age the loss of blood is always a serious matter,) and women in child-bed, when the process of parturition must of itself tax the system with loss of blood, how often, I say, have not patients of these classes been hastened to the grave by injudicious depletion? Do we not continually hear of copious blood-letting having been practised in convulsions occurring after parturition, and consequently after the blood-vessels have already been more or less unloaded?—and all this in the very class of individuals whose constitutional peculiarities evince that general want of tonic and stamina which predisposes to convulsions! If the irritability of the nervous system be in a direct ratio with the feebleness, laxity and deficient tonic of the tissues, should we not pause, should we not carefully weigh the case in all its bearings, before we resort, in convulsive affections, to the most direct method of impairing the strength and stamina of the body? I am persuaded that the indiscriminate and lavish abstraction of blood, recommended in convulsive affections by some authors, and instituted by too many practitioners, is most pernicious, and probably one of the most frequent causes of the fatal result. Opiates and narcotics in general have been too sparingly resorted to, owing to the erroneous apprehension of cerebral congestion. This class of remedies, by subduing the irritability of the nervous centres, accomplishes precisely what is most desirable when the patient is threatened with convulsions. There can be no doubt that by their judicious administration on the first appearance of the symptoms denoting a convulsive tendency, a large number of cases of puerperal convulsions would be averted, and that if given after the paroxysm they would prevent their recurrence. Although these remarks are applicable to almost every convulsive affection, they are peculiarly so in those cases in which the spasms are induced both by pain and by irritation, as in those of the puerperal and traumatic state. BRACHET recommends very highly in infantile convulsions a combination of *Ext. Hyosciam. niger* and *ox. zinc*.

With regard to the tendency to asphyxia manifested in certain convulsive affections, as epilepsy, spasmodic croup and asthma, puerperal eclampsia, hydrophobia, &c. it demands our special attention, as it is in many cases the immediate cause of death. The rima glottidis, being in such affections more or less closed, respiration is correspondingly impeded. It is particularly under such circumstan-

ces that MARSHALL HALL recommends dashing cold water in the face, and tickling the fauces and nostrils, so as to induce inspiration. They have been proposed also in the asphyxia of new-born infants. The operation of tracheotomy under impending asphyxia in hydrophobia was, I believe, proposed by Dr. PHYSICK, since when its necessity in all similar spasmodic conditions has been strongly urged by Dr. M. HALL and others. Some years ago a patient, apparently dying from asphyxia, consequent on deep intoxication, was saved by the timely performance of this operation, by Mr. SAMPSON, of Salisbury in England.

ARTICLE II.

*An Essay on Auscultation—By WM. H. CUMMING, M. D.**

Since the great discovery which has so illustrated the name of LAENNEC, the subject of Auscultation has received more attention than any other in the whole range of medical science. The accuracy of its results, the important information which it gives concerning the nature and progress of a numerous and important class of diseases, often existing in an isolated state, and perhaps more frequently still intercurrent with other disorders, sufficiently account for the enthusiasm manifested in the cultivation of this most important mode of observation. We shall attempt in this essay to show the falsity of the generally received theory of the production of the sounds perceived in the respiratory organs. Without devoting any time to the useless and therefore irksome task of stating preliminaries now common in the science, we proceed at once to the consideration of our subject.

In its examination, we shall pursue the following order:—1st. We shall state in all their simplicity the facts which present themselves

* It is but justice to Dr. CUMMING to state that this essay was drawn up before he left for China, two years ago.—Edrs.

to the observer. 2nd. We will give the explanation proposed by LAENNEC. 3rd. We shall offer various objections to this explanation. 4th. We shall conclude with an exposition of the theory of Mr. BEAU.

In ausculting the various portions of the respiratory apparatus of an individual in good health, different impressions are received by the organs of the observer. These sounds are generally admitted to be three in number. The first, which may be heard in the larynx and superior portion of the trachea has been called the *tracheal souffle*. This division was not admitted by LAENNEC who confounded this sound with the second—it is supposed to be produced by the friction of the air against the different surfaces of the pharynx and larynx. The second, which differs from it in some respects, though preserving the same general character, may be most readily perceived by applying the ear to the back, between the scapulæ opposite to the root of the lungs. This sound is too well known to need any description. It was styled by LAENNEC the *bronchial respiration*. The third sound is more generally diffused, and may be heard on applying the ear to any portion of the chest whose internal surface is applied to the lungs. It was said by LAENNEC to resemble the deep inspirations which occasionally take place in quiet sleep.

To the explanation of the causes of the bronchial respiration, LAENNEC does not seem to have given much attention. It is evident, however, from one or two incidental remarks, that he considered it to be produced by the friction of the air against the internal surface of the bronchia. His attention was much more excited by the third sound, styled by him the *vesicular murmur*. He asserts that it may be readily perceived, and that it indicates the penetration of air into the pulmonary tissue and its subsequent expulsion. He says that the impression conveyed to the mind of the observer, is that of a fluid passing from a narrow canal into a more ample space. We will not here state the many peculiarities of this sound, and of the conditions under which it is produced. These we shall reserve for our chapter of objections, as we shall find in each one a stubborn fact refusing to pass under the yoke of this explanation. And as a theory is only valuable as a general expression of individual facts, we shall go far toward the destruction of the explanation of LAENNEC, if we can show that most of the facts so well observed by himself and others remain still isolated and refusing to be admitted into this unnatural generalization.

Before entering upon an exposition of the many direct and (as we think) unanswerable objections, we must present a few reflections on the indispensable prerequisite to the exactness of this theory, viz. the existence of the cellular structure of the lungs. This cellular structure once generally admitted, is now not only doubted but even denied by many anatomists. The latest researches on this subject seem to show that the lungs are nothing more than an agglomeration of bronchial tubes ever decreasing to their termination—lined by a mucous membrane in which ramify the terminations of the pulmonary arteries. These tubes are united by a tissue resembling the general cellular tissue of the body, forming however a smaller portion of the pulmonary mass than is generally supposed. Besides this conclusion derived from actual inspection, there is a consideration drawn from the philosophy of anatomy which has presented itself to my mind with great force, probably because it has originated there. It is evident that the lungs were intended to expose an immense surface to the action of the atmosphere. Their structure must however occupy but a small space that it might not interfere with the functions of the adjacent organs. A moment's consideration will show that the existence of vesicles at the extremity of the bronchia is not compatible with the exposition of the greatest possible surface to the atmospheric air. Though this consideration may not be conclusive, it must have great weight with those who have carefully studied the structure of the body, and observed the wonderful wisdom every where displayed in our physical frame. These two considerations render the vesicular or cellular structure of the lungs highly improbable, and therefore tend to invalidate a theory based on that supposition. But we go farther, and assert that we doubt not only the mode of formation generally assigned, but even the locality. We are disposed to deny that this respiratory murmur is formed at or near the termination of the bronchia in the lungs. Let us notice some of the peculiarities of this sound. One of those most worthy of remark is the superior intensity during inspiration. It is indeed heard at expiration, but is feeble and seems distant. This fact did not escape LAENNEC. It has been supposed that the explanation of this fact might be found in the introduction of a larger quantity of air than that expelled by expiration. But this difference is found to be very small if it really exist. It is also fully compensated by the increased quantity of watery vapour and carbonic acid, while at the same time the elevation of temperature which the air necessarily undergoes in

the lungs, must render the volume of gaseous matter expelled fully equal to that inhaled. It has been also urged in reply to this objection, that the air enters the lungs with greater velocity than that with which it is driven off. This is, however, a pure hypothesis, based on nothing but the determination to find a reason for an unreasonable notion. The time employed in expiration is equal to that in which the air is introduced, and as we have shown the quantities to be equal, there is no reason for an increase of velocity. It has also been observed that this respiratory murmur is much more intense in women and children than in men. So uniformly does this exist in children, that an unusual degree of intensity in the murmur of adults has been styled *puerile respiration*. This fact had evidently puzzled LAENNEC. He explained it by supposing that children breathe more largely than men, forgetting, as it would seem, that the same could not be true of women. But we know that there are found men in good health, of active habits, indeed differing in none of these respects from others, who yet exhibit this puerile respiration. In certain diseases, when a large portion of the lungs is affected, we frequently find this puerile sound. This was most readily explained by LAENNEC, who asserted that when a large number of cells were closed those which were pervious were more forcibly distended than under ordinary circumstances. But this triumph was short-lived, for it was found that in certain cases of violent pneumonia or pleurisy, when large portions of the lungs were unable to perform their functions, and when therefore the pervious cells must be much distended, no puerile sound was observed. To comprehend in its embrace these three apparently conflicting facts is above the power of the theory of LAENNEC. It is also found that in certain animals, e.g. the horse, the ass, the ox, the camel, the camel-leopard, &c. who breathe freely, whose lungs fully expand, the respiratory murmur is not heard in ordinary circumstances. If the force and frequency of respiration be augmented in those animals by rapid and violent exertions, we shall succeed in hearing this murmur as distinctly as in the human subject. We have thus cited many facts observed and stated by LAENNEC which he was unable to explain. They are inexplicable by his theory. The last and strongest objection we shall reserve until we shall have presented the theory of our adoption, for it acts at once on the offensive and defensive, overthrowing the old and establishing the new doctrine on a firm and immovable basis. We think that enough has been said to show that the theory generally received

is opposed by many well-observed facts, which it cannot explain, with which it is inconsistent, and with which therefore it cannot be consistent. Shall the facts or the theory yield? We prefer the latter alternative, and as the former are universally admitted, we shall adhere to them. And before proceeding farther, we will present a few thoughts which seem to be peculiarly appropriate here. After considering the structure of the bronchia, lined as they are by a smooth membrane lubricated by a thin mucus, remembering at the same time the small velocity with which the air traverses them, we are surprised that any appreciable sound should be produced. When we auscult an artery in the healthy state of the system, differing as it does from the transient bronchia, by its superior size, by the density and velocity, and consequently by the momentum of the fluid passing through it, we find a sound far inferior in intensity to that perceived on ausculting the chest.

Proofs.

Is the sound more intense at inspiration than at expiration? What more natural or consistent with every day's experience, than that a sound conveyed to us by a current of air should be louder than the same sound compelled to force its way to us against the direction of that stream? Is it stronger in women and children than in men? A knowledge of the comparative anatomy of the larynx in different sexes, and at the various periods of life, offers a ready solution. Do we not know that the cavity of the larynx undergoes great changes in males at the age of puberty—that the ventricles are dilated, the thyroid cartilage enlarged, the opening of the glottis increased? Do we not know that in females this change is slight? What then more reasonable than that the intensity of the sound should increase whenever the conditions favorable to this modification exist? And if the original sound be more forcible, it will be more intense at each point where it is examined. But actual observation excludes all necessity for a resort to reasoning. If we auscult individuals of the different sexes and children, we shall find that the laryngeal sound of men is feeble than that of women and children. Do we find some men who present this puerile respiration? On ausculting such we shall find an unusual intensity of the laryngeal sound. We shall find that their thyroid cartilage is not much developed, that their voice is high, and that this change which occurs in all men has been slight in these cases. Do we observe this puerile respiration existing in certain

diseases of the lungs? On examination we shall find the laryngeal sound proportionably increased. Do we fail to observe it in certain cases where the violence of the disease is the same or even greater? We shall find that these individuals present no sensible augmentation of the laryngeal-sound. In no disease can this fact be more readily observed than in pneumonia. We frequently see patients of this kind who produced great sound in the larynx. This should not be confounded with that formed in the nasal fossæ. We find others, who, while breathing as rapidly, and with as great difficulty, present no increase of the natural sound. The position of the patient, the state of his nervous system will introduce remarkable modifications in his respiration, and by placing in supination an individual occupying the sitting posture, we may frequently augment the laryngeal sound and the consequent respiratory murmur. An objection must be met here. We have said that on ausculting the chests of certain animals we could not perceive the respiratory murmur. It will be asked, did not the laryngeal sound exist? We answer that it does, but is prevented from reaching the chest by a peculiar circumstance. We have cited the horse, the ox, the giraffe, the camel, as instances of this kind. Though differing widely in their organization, they have one thing at least in common,—a long neck. In many of them, the laryngeal sound is feeble, and is lost before arriving at the terminal bronchia, or is rendered so soft that it is not perceptible. It will be noticed that these animals have low voices, proving thereby that the aperture of the glottis is large. But if the laryngeal sound be much augmented by rapid and violent exercise, we are then able to perceive the respiratory murmur. So that this objection, apparently so formidable, readily enters with the others and acknowledges the justice of our generalization. In the third portion of this essay we mentioned the reservation of a powerful objection to the vesicular theory. We did so in order to bring it with more effect to the establishment of our adopted doctrine. It contains within itself the root of the matter, and is amply sufficient to answer all our ends of demolition and edification. It is the fact, that we all possess the power of diminishing at will the intensity of the respiratory murmur without affecting the plenitude or rapidity of respiration. The only condition is an enlargement of the aperture of the glottis. So far from a necessity of diminishing either the fullness or frequency of respiration in order to produce this effect, we may increase both almost indefinitely without endangering the success of the experiment.

With a little practice any one will soon be able to respire largely and rapidly without producing an appreciable sound in the larynx or chest. To such a fact commentary is injurious. All possible inductions will readily be made by the feeblest intellect. For the information of those who desire to repeat the experiment, we shall give a few directions. Three persons are necessary to its proper performance: one to auscult the trachea, another the lungs of the third. The diminution of the laryngeal sound, as observed by the first, will be found by the second to coincide with the diminution of the respiratory murmur; and when the former ceases to perceive the sound in the trachea, the murmur will be imperceptible to the latter.

The arteries are frequently more favorably situated for the transmission of any internal sound to the ear of the observer, as they are far more superficial. We indulge therefore in a legitimate astonishment when we are told that so rare a fluid passing with so small a velocity, through so small a vessel and at so great a depth, should produce a sound so superior in energy. And under such circumstances we are justified in demanding an explanation which shall solve all the phenomena. On finding that the generally received theory is thus at variance with so many well known facts, we are led to inquire on what has been founded the favorable reception which has been given to it by the members of the medical profession. It is the appearance of simplicity which it presents that has secured for it such general support. Indeed, the first impression is that the sound perceived is formed immediately under the ear of the observer. But this is at best but a small probability. Nothing is more fallacious than the decisions of our minds in regard to the direction of sounds. Were we guided by them, we should suppose that the cliff addressed us, because the sound is reflected from it to our ears. We shall here conclude our objections to the former theory, and proceed to expose and develop that whose defence we have assumed.

In a preceding part of this essay we have examined the sounds according to the scholastic mode. We have gone to their study in the manner counselled by the dogmatists of our science—we have studied them "*secundum artem*;" let us reverse the method, and trusting to the guidance of another leader, let us examine the same phenomena *secundum naturam*. And let us set out on this course assured that we are under the direction of a safer, if a less brilliant guide. Let us then follow the air as it penetrates the respiratory passages—The first point open to our investigation is the larynx.

Here we find a sound of peculiar character and of considerable energy. The cause is readily discovered. The slightest knowledge of the anatomy of the larynx convinces us that all the conditions necessary for the production of such a sound are present in that organ. The column of air, increased in diameter by the existence of the ventricles, is compelled to traverse the narrow passage offered by the glottis. If we examine it at inspiration and at expiration, we find that it does not vary much in intensity at these different times. This might have been admitted *a priori*, for the glottis is inferior in diameter to the trachea. The induction which we have made as to the cause of the sound is then entirely conformable to the physical laws of sound. Admitting that we have discovered the cause of the sound in the larynx, we follow the trachea down, ausculting it at short intervals. We observe a modification of the sound which has become very apparent before we have reached the sternum. We are here compelled to leave the trachea in front; but, nothing daunted, we recommence our examination in the rear. On applying the ear above the spinal column, near the level of the superior extremity of the sternum, we perceive a sound very similar to that of the trachea, and yet differing in some respects. We now proceed either to the right or left from this point, and we find a decided but gradual change, until we arrive at the axilla, where we receive the respiratory murmur in all its purity. By this mode of observation, instead of three sounds, we have an indefinite number, which pass from the laryngeal to the tracheal, to the bronchial, and finally to the vesicular, by insensible gradations. What cause has effected these changes? The changes are gradual, i. e. composed of a large number of slight modifications, requiring for their production an equally large number of efficient causes. We may examine the trachea, the large and smaller bronchia, but we find no anatomical condition capable of explaining these phenomena. We have found that each sound in the trachea is merely a modification of that heard in the larynx. We have traced the same relation between the tracheal and bronchial sounds. The idea then irresistibly suggests itself, that there is an original sound, and that it is the laryngeal. Where then are the modifying agents? for we have admitted that they must exist in indefinite numbers. They are the different distances of each successive point from the glottis. The sound is borne by the current of air, and is thus carried to the terminal ramifications of the bronchia, where, from the distance, and the small size of the tubes, it assumes the peculiar charac-

ter of the vesicular murmur. The increase of the aggregate diameters of the bronchia may also exert some influence upon the quality of the sound. Here is the conclusion of the whole matter. Are our proofs demanded? We take the facts which we have before urged against the former theory. The reverse experiment will be still more readily performed. By increasing the sound of the larynx, the respiratory murmur may be made to surpass in intensity the loudest puerile sound. To our mind this experiment is satisfactory—it fixes every point which was before doubted, and bestows the fullest assurance of the truth of the theory which we here advocate. Before concluding, we beg leave to introduce an argument from analogy which must please, if it do not instruct. If we apply an ear to the chest of a person speaking, we observe a confused sound somewhat resembling the noises of a distant crowd. If on the contrary we examine the trachea, or bronchia, of an individual engaged in speaking, the sound is louder and more defined. We seem to have the tube under our ear. We observe here the similarity of the modifications impressed upon these different sounds. The seat of the voice is, without doubt, the glottis. But this similarity is still greater in morbid states of the pulmonary organs. In those cases where the minute bronchia are rendered impervious to the air, either by the extravasation of the blood or by external pressure, we find certain modifications of the respiratory and vocal sounds. And it is remarkable that the writer, to whom we have so frequently referred, has used almost the same language in speaking of these modifications. In these cases he says that the bronchial souffle is heard so distinctly that it seems as though some one was blowing softly into the stethoscope. In speaking of bronchophony, he remarks that the voice appears to be produced within the same instrument. In describing the higher degree of these two phenomena which exist in cases of extensive excavations, he observes that the respiration produces an impression similar to that resulting from the breathing forcibly in the stethoscope, the sound seems to reach the ear. This very remark is applied to pectoriloquy. The voice seems to rise into the tube, and in some cases appears even to reach the ear, and in a few instances resembles the sound produced by the act of speaking aloud in the ear of an individual. How striking is this unintentional tribute to our theory! It could scarcely have been rendered more flattering. An important induction from these facts must here be noticed. In examining patients affected with diseases of the chest we

are often unable to auscult the voice, either from its weakness or from the unwillingness of the patient to speak. We need never be uneasy on this account. Do we hear a souffle? There is bronchophony. Do we hear the cavernous respiration? There is pectoriloquy. Have we a patient who is constantly talking? Allow him this privilege—It does not interfere with the auscultation of the râles, nor do you need any other information as to the state of the respiration. Is the voice indistinct and murmuring? Rest assured that the respiration is good. Have you bronchophony or pectoriloquy? If the patient were silent, you would hear the bronchial or cavernous souffle. Does the voice assume an amphoric sound? Believe that the amphoric souffle is not absent. Do you expect the existence of some compression on the trachea or large bronchial trunks? Examine the voice. Formed, as it invariably is, during expiration, it is so much louder than the murmur of expiration that it will advantageously replace the latter as an object of examination. We are aware that other inductions may be made from these facts, but we are disposed to leave them to the ingenuity and reflections of the reader.

PART II.—REVIEWS AND EXTRACTS.

Thérapeutique Appliquée, ou Traitements spéciaux de la plupart des Maladies Chroniques. Par P. J. C. DEBREJNE. 2me. Edition, pp. 332. Baillière, 1844.

(CONCLUDED.)

Phthisis.—Although Dr. D. classes this too-frequent scourge of France among the chronic Phlegmasiæ, he expressly says that he does not regard it as at all of an inflammatory character in its early stages. During the course of the disease, there is a strong tendency, as every one knows, to the frequent occurrence of a pneumonic and pleuritic attack; but this is to be regarded only as an *epi-phenomenon*, and not as a necessary symptom. With respect to treatment, we find that our author has almost entirely renounced—after the experience of their utter inefficacy—the employment of nearly all remedies, save and except the insertion of a seton in some part of the

chest, and the persevering use of Iceland-moss jelly in large quantities, not forgetting the Opium or Belladonna once or twice in the course of the 24 hours. He recommends the same line of treatment in those cases of chronic purulent Catarrh, the symptoms of which so closely resemble those of genuine tubercular Phthisis; and, in not a few instances, has a cure taken place under their use, when the case had seemed to be utterly hopeless.

From the Chest we pass on to the Stomach. After delivering some excellent remarks on the mode of distinguishing *gastralgic* from *gastritic* pain, our author exposes, with no less truth than severity, the melancholy mistakes that have been committed of late years by so many of his countrymen, since the prevalence of the Broussaian doctrine. He shows that the existence of an inflammatory state of the stomach may generally be diagnosticated by observing the effects which different kinds of food have upon the gastric pain. If, for example, farinaceous and milky substance can be taken well, while those of an animal nature give rise to a sense of uneasiness, we may very generally presume that there is a greater or less degree of actual gastritis. If the reverse be the case, and if light animal food, such as chicken-tea or mutton-broth, be borne best, we may feel assured that there is no inflammation, however troublesome the gastric uneasiness may be. The diet may therefore be regarded as a most useful *exploratory* means of diagnosis.

"It often happens that the epigastric pain does not yield to leechings and low diet; and we be to the physician who pertinaciously seeks to combat it by continuing the use of the same means, and who has not learned to modify his treatment according to the varying condition of each case. For the relief of the gastric pain, which resists the application of leeches, &c., opium is often an excellent remedy; a light preparation should always be preferred, and it will be well to exhibit it in some mucilaginous vehicle.* If, however, this does not succeed in the course of a day or two, we should then have recourse to a volant blister. Should this also fail, we shall have good reason to believe that the epigastric uneasiness is more or less dependent upon an atonic state of the stomach; and this we can generally determine by having recourse to the *explorative* diet of which we have spoken. Should such be found to be the case, we must allow the patient more nourishing food, and we should try the effect of an infusion of Rhubarb or Columba-root, to which may be added a weak opiate, if deemed necessary."

In *Chronic Hepatitis*, our author strongly recommends the use of emollient poultices on the hypochondriac region, applied every night, and also during the day, if the patient keeps his bed. They produce

* A favourite formula of our author is this:—

R. Aquæ lactuæ	℥viij.
Laudani Sydenhami	℥i.
Gum. arabic	3vj.
Syrupi simpl.	℥ij.
Bicarbonat. sodæ	℥ij. M.

A table-spoonful or two to be taken twice or thrice a day.

a local diaphoresis, which is often very serviceable in relieving the internal congestion. The occasional use of a tepid bath at the same time will much promote the cure; for the skin is generally very dry and lichenous in chronic liver complaints. Emollient aperient enemata are also very useful. Saline purgatives, dissolved in a large quantity of herb-tea, to be followed by repeated doses of rhubarb—which has long had the reputation of directly promoting the flow of the bile—are always more or less necessary.

In various chronic hepatic affections and visceral obstructions, the following formula has been found by Dr. D. to answer exceedingly well.

R. Pul. Aloes 3ij,
 Sapon Hispanic.
 Pulv. Rhei.
 Ferri Subcarbonat. . . aa 3iv.
 Potassii Ioduretti . . . 3ij. In pil. 120 divide.

Dose—From two to six pills in the course of the day.

If these pills do not prove to be sufficiently purgative, the patient should be instructed to drink some aperient mineral water to aid their action.

Erysipelas.—"The treatment which we usually adopt in recent cases of this disease, before the formation of pus has taken place, is the abortive and empiric plan followed by Dupuytren, and which he derived from the practice of M. Pétit of Lyons. This method consists in applying a volant blister to the very centre of the inflamed part. The object which we have in view by this bold and seemingly not very rational mode of treatment, is to arrest the internal inflammatory action, and to cause it, so to speak, to *abort*, by drawing to one circumscribed spot of the skin all the violence and *raptus* of the existing disease. It is quite true that this powerful concentration and sudden localization of the inflammatory action may, in consequence of being excessive, induce gangrene of the blistered part; but this accident is of very rare occurrence indeed. Out of between thirty and forty cases treated by us, we have only met with a single instance of it; and this occurred in a cachectic patient, whose constitution was altogether unhealthy. The application of a blister to the knee was in this case followed by the formation of a gangrenous eschar in the part, and the eventual consequences were extensive detachment of the surrounding skin, and considerable suppuration. Of late years, however, it would seem that this unpleasant result of the vesicatory treatment has been observed several times in the Hôtel Dieu, at Paris, and that antiphlogistic measures have been on the whole very successful; whereas during the years 1813, 1814, and 1815, it was remarked, by all who followed Dupuytren's practice, that bleeding, &c. produced but little benefit, while blisters seemed to be quite a specific remedy."

Chronic Cutaneous Diseases.—Our author, without troubling himself with the divisions and subdivisions of these diseases adopted by most dermatological writers, groups them together under the general appellation of *dartres*, and lays down some general therapeutic direction that may be applicable to all. A mild unirritating diet, more vegetable and milky than animal, emollient refreshing drinks—one of the best of which is whey—and the more or less frequent use of warm-baths, should never be omitted. Dr. D. throws overboard, as

being utterly useless, the farrago of what have been called *deperative* remedies, such as the infusion of Fumaria, Dulcamara, Bardanum, Saponaria, Scabiosa, &c. &c. and he supports his own opinion on this point by quoting that of ALIBERT. The only internal remedy that he uses is the following :

R. Flor Sulphuris 3iv.
Sulphureti Antimon. rubri. . . 3j.
Calomelanos gr. xij. M.

To be divided into 40 powders, of which one is to be taken twice a day.

The external treatment is, according to his experience, of much greater importance than any internal remedy. As a matter of course, as long as there is any irritation present, the more simple the baths and other external applications are, the better; but when this has been subdued, we should as early as possible have recourse to such as are slightly stimulant and exciting. Of these a sulphur bath—prepared by adding five or six ounces of sulphuret of potash to an ordinary bath—will be found very convenient. The use of this should be continued steadily for two or three months at least. If the *dartrous* affection is limited to the legs, as is often the case, it may be sufficient to use a partial sulphur bath to them alone: from one to two ounces of the sulphuret may be added to the requisite quantity of water. This is a far better application than all the ointments and lotions that are so generally in use. “If the local atonic *dartres* prove very obstinate, and will not yield to sulphuretted baths and lotions, we are in the habit of trying an ointment—composed of ten drams of the sulphuret of potash to six or eight ounces of lard, flavoured with oil of thyme—and usually with good effect: the strength of the ointment must be varied according to the degree of irritability in the affected parts.” Dr. DEBREJNE tells us that, for the last five and twenty years, he has made use of no other application than the sulphuretted ointment—weak or strong, according to circumstances—in the numerous varieties of *Tinea*, or Scalled-head.

Of the Asthenic class or division of chronic diseases, none is of such frequent occurrence, and therefore so important in the eyes of the practical physician, as atonic Dyspepsy, or, as our author designates it, *Gastro-atony*. The following remarks are picked out from the description which he gives of it.

This disease is of very frequent occurrence, especially among women who are subject to leucorrhœal and chlorotic affections. Its most obvious symptoms are loss of appetite, uneasiness and sense of distention after eating, flatulence and often nausea and sickness, a feeling of sinking weakness and craving, more rarely of dragging, pain about the stomach; constipation; tongue white; taste more or less depraved, but without being bitter or clammy, as in bilious derangements; loss of muscular strength; tendency to nervous ailments, and these usually accompanied with great irritability of temper. Very generally (and this remark, by the by, it is especially important

to attend to,) an invigorating animal diet agrees better than a farinaceous and vegetable one—a circumstance that is very significant, and obviously excludes the idea of any phlogistic or irritative element being present. The mere circumstance of there being some degree of pain in the epigastrium, even although this be increased on pressure, is by no means a sufficient reason for suspecting the existence of any inflammatory action; for this pain may be truly called an *atonic* pain, and can be relieved neither by opiates nor antiphlogistics, but only by appropriate tonics.

With respect to the *treatment* of Gastro-atony, the mere regulation of the patient's diet will often suffice to relieve the milder and less chronic forms of it. He should avoid the use of much vegetable or farinaceous food, and live chiefly on animal meat and good bread, with or without an allowance of a light sound wine, according to circumstances. The drinking of large quantities of hot drinks, such as tea, coffee, &c. is most injurious. Our author very pithily remarks, 'pour les maladies chroniques apyretiques, medicaments secs; et pour les affections aiguës, medicaments liquides:' the remark would apply better to *food* than to *medicines*. Steel and vegetable bitters are by far the best remedies that we can administer, more especially when there is any leucorrhœal or chlorotic ailment. Rhubarb is the preferable aperient medicine in such cases. If the patient be subject, as occasionally happens, to attacks of nervous or spasmodic vomiting, Dr. D. always has recourse to the Columbo powder. If much pain accompany this unpleasant symptom, a small portion of opium should be added to the Columbo. Ice too will often be both grateful and useful, not only in allaying the irritability of the stomach, but also in giving it tone.

When *Leucorrhœa* accompanies this atonic state of the digestive organs, Dr. DEBREYNE recommends the use of the following pills:

R. Ferri Subcarbonat.	. . . . .	3iv.
P. Cassuvii (Cashew)	. . . . .	3iv.
P. Aloes	. . . . .	3j.
Terebinth. Veneti	. . . . .	q. s. ut fiat massa in pil.

cxv. div.

Dose: one or two to be taken, along with some bitter tincture or infusion twice or thrice a day.

A somewhat similar formula will be found very efficacious in most cases of *Chlorosis*.

Dropsy.—The following extract gives a good summary of our author's views respecting the treatment of this disease, when it is not dependent upon any organic visceral lesion.

"We should always make sure of one of the outlets, by which nature usually seeks to evacuate the serosities effused within the splanchnic cavities. Now, as in the cure of Dropsies, the serous evacuations most frequently take place by the bowels and kidneys, it will be prudent to act upon both of these emunctories, by combining the use of diuretics with that of hydragogue purgatives. At the

same time, we should prescribe a dry and tonic diet, consisting chiefly of broiled or roasted meats, bread, and a certain allowance of light wine. The patient should be directed to take as little fluid food or medicine as possible, and he should therefore seek to quench his thirst with fruit, ice, and such like things."

The favorite medicine of Dr. D. in dropsy is a medicated wine, composed of

Rad. Jalapæ contus.	3 iiss.
— Scillæ contus.	3 iiss.
Pot. Nitratis	3 v.
Vini Albi	℞ j.

Dose: from one to three tablespoonfuls thrice daily.

The number of alvine evacuations need not exceed six or eight in the 24 hours. The remedy acts in some cases chiefly on the bowels, in others chiefly on the kidneys, while in a third set of cases both emunctories are powerfully affected at the same time. When patients object to the use of this wine, or when it appears to disagree with the stomach, we may have recourse to the following pills:—

℞. Pulv. Digitalis	3jv.	
Pulv. Scammoniz	3ij.	
Pulv. Scillæ	3ij.	
Extract. Juniperi	q. s.	Ut fiat massa in pil.

cxx. dividenda.

Dose: from one to two pills three times a day, washing them down with three or four spoonfuls of white wine, in a bottle of which half an ounce of nitrate of potash has been dissolved.

Dr. D. says that he has found these pills especially servicable in cases of Hydrothorax and Hydropericardium. He is too experienced and candid a practitioner not to admit that we can seldom, or never, hope to effect a *permanent* cure in such cases; still it is an important thing to relieve our patients for a time, and prolong, if it be not given us to save, life.

In cases of Organic Diseases of the Heart, our author mainly relies on the internal administration of the nitrate in combination with tincture of Digitalis—given in much larger doses than are usually recommended—and on the application of leeches and blisters over the *cardiac region*. He seldom varies his plan of treatment, and assures us that, with these simple means, followed out for a due length of time, he has succeeded in relieving a great many patients, who had derived no benefit from a variety of other remedies.

In the closing Chapter of his Work, Dr. D. lays down some excellent general rules for the treatment of disease in the members, male and female, of those austere religious orders, who insist so rigidly on the observance of numerous and prolonged fasts, in addition to other modes of penance. Of these orders the most conspicuous are the Chartreux and the Trappists, "whose establishments," we are told, "are now so numerous, and whose moral and religious influence, along with the benefits of agricultural improvement which they have introduced, are every day more and more felt and appreciated in many of

the finest districts of France." A vast deal of harm has been done for many years past by the too common adoption of Broussaian principles, by the medical practitioners of the Provinces; but now, thank God, the errors of Physiologism are most fully acknowledged and repudiated. As a general truth it may be asserted, that the diseases of austere religionists will not bear well much depletion.

Even in acute disorders, the lancet should be sparingly used; and, instead of repeated bleedings, recourse should be had to the internal use of antimonials, and to blisters, &c. In fevers, when there is no distinct inflammatory localization, general bleeding should very rarely, if ever, be practised. Of chronic diseases, by far the most common among the Monastic Community are Gastro-atony and its usual concomitants of Dyspepsia, Colic, Gastralgia, general weakness, and so forth.

As for *Gastritis*, the term might be erased from the peculiar nosology to which we are at present alluding. Opium, either alone or in conjunction with other remedies, according to circumstances, is an admirable remedy in a vast number of the gastric and enteric disorders to which the Trappist brethren are liable. It would seem, from the statements of our author, that these monks are singularly exempt from the epidemics which prevail in the neighborhood of their establishments. Even the cholera in 1832, did not enter one of them throughout the whole of France. This exemption he attributes to the temperance of their diet, and the calm unruffled tenour of their lives. He paints in glowing terms the joys of the peaceful life of the pious Cenobites.

"How greatly mistaken," exclaims our worthy author, "are they who suppose that religious penitents are gloomy, melancholy and hard-hearted men, or that they become the early prey of a tedious and painful death! No; their life is one long and blessed repose; or rather, as the Prophet says, it is a river of peace which calmly bears them on to the everlasting rest of God. They seem to the eyes of the worldly, who are altogether absorbed with the frivolities of the passing scene, to languish and die; and yet they are full of health and life, for they taste a peace and happiness of mind which the world cannot know: *Visti sunt oculis insipientium mori; illi autem sunt in pace.*"

Observations on the Use of Blisters in Acute Inflammatory Diseases, and on the Effects of Bleeding, Blisters, and Mercury, on the Blood. By JAMES TURNBULL, M. D., Physician to the Liverpool North Dispensary.

In the *Lancet* of the 31st of August, 1844, my attention was drawn to the treatment of acute inflammation by large blisters, from observing some excellent practical remarks on the subject by Dr. Henry Bennet, in which he has shewn that they may be safely and beneficially used at an earlier period of acute inflammatory diseases, espe-

cially of those of the organs contained in the thoracic cavity, than they are generally employed. The kind of cases to which blisters are best suited; as well as the period of the disease at which they may be most advantageously applied, are matters of great practical importance, owing to the extent to which they are used; and I take, therefore, the opportunity of making some observations on these points, as well as on the effects produced by bleeding, blisters, and mercury, on the different constituents of the blood.

My attention was first particularly directed to the safety and advantage of applying blisters in the early period of acute inflammatory disease, from observing, when in Paris, nearly five years ago, the treatment adopted by M. Gendrin in pneumonia and other acute inflammations, and I am glad to find that the results of his mode of treatment have been made known to the profession by one who has had the opportunity of closely observing it while holding, during nearly three years, the office of house-physician under him. I observed, as has been already pointed out by Dr. H. Bennet, that the greater part of M. Gendrin's treatment consisted in the application of very large blisters, and that their repeated application, with a very moderate use of bloodletting, was attended with very successful results in his practice at La Pitié. From having witnessed the safety and efficacy of this mode of treatment, which was different from what I had seen elsewhere, in the hospitals, either in this country or in Paris, I was led to entertain some doubt as to the correctness of the opinion held by most of our best writers, in regard to the injurious exciting effects of blisters in all acute inflammations during the early period. I have in consequence made use of blisters more freely, and at an earlier period, than I would otherwise have done, and have a high opinion of their value in the treatment of acute inflammations, especially after general or local depletion.

In robust and plethoric subjects, in whom the proportion of globules in the blood is, at the healthy standard, 127 in 1000, or above it, the treatment by general bleeding being found the speediest and most effectual in cutting short inflammation, has been almost universally adopted; and there can be no doubt of its superiority to every other in such cases, as it has been founded on the solid basis of practical experience. Looking, also, to the effects of general depletion upon the blood itself, though we are unable to trace clearly the mode in which it reduces the inflammation, we see no reason to doubt its superiority, for though it does not directly lessen the quantity of fibrin, the increase of which forms the essential change in the composition of the blood in acute inflammations, still there is reason to believe that it may indirectly prevent its increase, and in plethoric individuals the removal of a portion of all the constituents of the blood is assuredly the most effectual means which we possess of reducing inflammation.

Local depletion, by cupping or leeches, does not differ from general bleeding in its effects upon the blood, except in degree. It acts, how-

ever, less directly and powerfully upon the nervous system, and the action of the heart, from the blood being abstracted both more slowly and less copiously, but its less powerful action on the system is, in many cases, fully compensated for by its more direct effect upon the seat of the disease, and I agree with Dr. Stokes in considering it as a remedy of great importance, even in the treatment of pneumonia. Dr. Stokes has stated that he found the bold and repeated use of the lancet to be unnecessary in the great majority of cases, a single, or at most two bleedings, being sufficient; also that he regards general bleeding as only a preparation for other treatment, and that he considers local bleeding as the principal remedy. A case lately came under my care at the Liverpool North Dispensary, which may serve to illustrate the fact, that in large towns cases of acute inflammation of the lungs do occur, in which general depletion may be superseded by local blood-letting, assisted by blisters, and other antiphlogistic means. A middle-aged man, of large and rather robust frame, employed in a brewer's establishment, was attacked with well-marked acute inflammation of the lower and posterior part of the left lung. He was treated by a single cupping to the extent of about ten ounces, and by two large blisters, and, as it was also found that slight effusion had taken place into the pleura, the effect of mercury was pushed, so as slightly to touch the mouth. In this case, though general bleeding was not practised, the recovery was almost as rapid and perfect as I have ever seen it.

The preceding observations apply to cases in which the quantity of globules in the blood is about the healthy standard, or not materially below it; there are, however, especially in large towns, a numerous class of individuals also liable to be attacked with acute inflammation, though of a less active kind, in whom the proportion of globules, in the blood has fallen considerably below the healthy standard. from the operation of debilitating causes, such as sedentary occupations, the respiration of impure air, or deficient nourishment, as well as in consequence of the presence of other disease, such as tubercles, or of imperfect recovery from previous disease, such as fever. I have satisfied myself, from very frequent examination of venous and arterial murmurs, which are indications of this anæmic condition, that it is extremely common, and that it occurs, too, in persons who are not always deficient in flesh, or remarkably pale. Now, it is in inflammation occurring in individuals in such condition that blisters have been found most useful, for, in addition to their counter-irritant action, they produce local depletion, without, however, withdrawing that part from the blood—viz. the red globules, which is already deficient, and the deficiency of which constitutes a state of disease which is directly aggravated by the abstraction of a portion of the whole of the constituents of the blood. The correctness, therefore, of the treatment, which experience has established, very generally, in such cases, is confirmed by an examination of the effects of blisters on the different constituents of the blood.

Dr. H. Bennet has shown that, "both in non-inflammatory and in inflammatory diseases, blisters do not give rise to as much general excitement as is generally believed;" and in this I coincide with him, though I am disposed to regard their exciting effects, and the possibility of their doing harm, as greater than he has estimated them. We must hesitate, too, before we conclude that large blisters are devoid of injurious effect when applied in the early stage of acute inflammations, except in very rare cases, when we find that such writers as Copeland, Stokes, and Alison, express themselves strongly against the use of blisters before vascular depletion; and when, too, we find that Andral has expressed a doubtful opinion as to whether, by their influence on the fibrin of the blood, they may have a beneficial or injurious effect.

Dr. Stokes, in regard to the treatment of acute bronchitis, observes, "that counter-irritation may be considered inapplicable in the earlier periods of the disease so long as the skin is hot, the pulse strong, the expectoration scanty and difficult; in fact, so long as the first stage of the affection continues, that stage in which bleeding and tartar emetic are useful, blisters are inefficacious and often hurtful. It may be laid down as a general rule, that the longer we can with safety postpone the application of a blister, the greater certainty will there be of its favorable action." His views of their action in pneumonia are similar; for in treating of that disease, he refers to the observations he had previously made as to the treatment of bronchitis. We have here, then, the experience of one of our best practical writers, supported by the opinion of others of equally high authority in this country, opposed to the treatment of M. Gendrin.

Let us see what light is thrown upon the subject by investigating still further the effects which are produced upon the blood by the action of blisters. Andral has shewn that every local phlegmasia has the effect of raising the quantity of fibrin in the blood above the natural standard of three parts in a thousand, and that this increase is in relation to the extent of the inflammation, and the degree of febrile movement excited in the system, averaging, in acute inflammations, from six to eight parts, but in inflammation of the lungs, rising higher than in any other disease, in one instance having been found as high as ten and a half. This increase of the fibrin occurs, not only in inflammation of internal organs, but also in that of the skin as well as in burns, which most nearly resemble the effects of a blister.

We have no experiments to shew directly how far blisters may have the effect of increasing the fibrin in the blood; but from what has been observed in those cases of pleuritis in which a portion of the serum and fibrin have been separated from the blood, we have reason to think that the discharge of serum, or even of fibrin, at the surface of the wound caused by a blister, tends less to diminish than the artificial inflammation does to increase the quantity of fibrin. Andral has shewn that in two cases of pleurisy without effusion, the quantity of fibrin was 5.8 and 5.9, while in eight recent cases with effusion, it

varied between four and six. It would seem from this, that no very decided diminution of the fibrin of the blood follows immediately from the effusion in pleuritis. Direct experiment only can, however, decide how far the quantity of fibrin in the blood is affected by blisters. In treating of the effects of revulsive remedies upon the blood, Andral expresses his opinion on this point as follows: "Thus, a large blister takes from the blood a certain quantity of its serum; but besides, some fibrin is deposited at the same time at the surface of the wound produced by the action of the cantharides. Where there exists in the blood a superabundant proportion of fibrin, would this be the means of diminishing the excess of this principle in the blood? Or, on the contrary, if the action of the cantharides be exercised on a pretty large surface, if the inflammation which results from its application have a great intensity, if especially it augment the febrile movement already existing, may there not arise from this a new cause for the superabundant formation of fibrin, and may not this cutaneous phlegmasia, artificially produced to diminish the intensity of another by the kind of influence which it may exercise upon the blood, have the effect of increasing the morbid condition, which represents in the blood the phlegmasia state, and from which its intensity is derived?" (*Essai d'Hématologie Pathologique*, p. 124.)

The same distinguished pathologist has himself furnished us with the means of pursuing this inquiry some degree further, in comparing the action of blisters with the effects produced upon the blood by mercury, when given so as to act upon the mouth. He examined the blood in four cases in which the mouth was affected with different degrees of severity, and it is a singular fact, that, instead of finding a diminution of the fibrin, as we should have expected, from our knowledge of the influence of mercury in subduing inflammation, he discovered that there was an increase in the quantity, which corresponded with the severity of the specific mercurial inflammation of the mouth, and the degree of febrile action excited in the system.

In the first case, in which the pulse was 80, the inflammation of the mouth slight, but the salivation abundant, the quantity of fibrin was 4.5. In the second, there was more inflammation, and more febrile action; the pulse was 100, and the quantity of fibrin 5. In the third, there was more intense inflammation; the febrile action was nearly the same as in the second case; the pulse was 93, and the quantity of fibrin 6.4. In the fourth case, the face was greatly swelled, and the mouth crusted with false membranes; the pulse was 120, and the quantity of fibrin 6.6. In the last case, the blood had been examined a few days before, when the patient had been bled, on account of a slight attack of apoplexy, and only 3.5 of fibrin had then been found. In all the other cases, there was no other disease present that could have affected its quantity.

We see, from these cases, that mercury, by its specific effect upon the mouth, acts not from any power of causing a state of dissolution of the blood, but as a counter-irritant or derivative, and that its power

of subduing inflammation arises from a local counter-action, similar to that caused by a blister. Both remedies produce more or less febrile excitement, both seem to exercise a similar effect upon the blood, and both cause more or less secretion of fluid. The similarity in their mode of action being such, we must inquire how far they agree as to the circumstances in which they are useful in the treatment of inflammation. In this, too, we find that there is a similarity; for, in treating acute inflammatory diseases, we do not give mercury at once with the view of inducing its specific action on the mouth, but first make use of depletion, where it is admissible, with the double intention of reducing the inflammation, and of rendering the system more easily affected by the mercury. Both remedies, too, possess a powerful influence in causing absorption of the fluid which has been effused from inflammation of a serous membrane.

For these facts in regard to the effects of bleeding, blisters, and mercury, upon the blood, we are chiefly indebted to the recent researches of Andral. They seem to confirm the common opinion, that abstraction of blood should, in all cases in which it is admissible, precede the use of blisters and mercury; but while they throw some light upon the obscure but interesting subject of the effects of remedies on the blood, they would scarcely justify us in drawing any other positive inference.—*London Lancet.*

PART III.—MONTHLY PERISCOPE.

Paracentesis Thoracis in Acute Pleurisy.—At the latter end of last year M. Trousseau communicated to the Paris Academy a case in which he had successfully resorted to paracentesis in acute pleurisy. He has just published two other cases in which the operation was performed under similar circumstances; one of the patients recovered, the other died.

The first patient was a young woman, twenty-three years of age, who was attacked with acute inflammation of the left pleura on the 9th of June. She was actively treated, but without any amelioration taking place. The effusion was very considerable, the entire thoracic region on the left side being dull, the intercostal spaces dilated, and the heart thrown underneath the right cartilage. On the 21st the menstrua appeared, but stopped in the evening. During the night the oppression increased to such an extent that M. Trousseau, who was consulted, decided on performing the operation of paracen-

teas as the only chance of saving the patient. A small incision was made in the skin, between the seventh and eighth rib, a little to the outside of the breast. The skin was then raised until the incision corresponded to the intercostal space immediately above, and the ordinary abdominal trocar was introduced the depth of about two inches. On the spear being withdrawn the fluid rushed forth impetuously. In order to prevent the air from penetrating into the cavity of the chest, M. Trousseau wrapped round the pavilion of the canula a strip of very thin skin, which the fluid raised easily in passing out, but which, falling on the orifice during deep inspirations, effectually closed it. An assistant compressed the abdomen, so as to push up the diaphragm, as also the parietes of the chest. Four pints of serosity were thus withdrawn. The canula was then rapidly withdrawn, the skin being pressed down at the same time. The incision regained its position, below the puncture, and was covered with a small piece of court-plaster.

The heart immediately returned to its natural position, and all dyspnœa disappeared. The patient slept seven hours the following night, and rapidly recovered. A fortnight after the slight operation she was able to walk out; the respiratory murmur had returned, her general health was good, and the only abnormal symptom which she presented was a certain degree of matity in the inferior part of the left thoracic region.

The second patient was a young woman, twenty-five years of age, who, a couple of days after a laborious accouchement, was seized simultaneously with symptoms of pleurisy, enteritis, and peritonitis. She was bled, a blister was applied to the parietes of the chest, and calomel was given internally. The abdominal symptoms became less intense, but the thoracic increased in violence, and the effusion became so considerable on the twelfth day that death appeared imminent. The heart was displaced, and the intercostal spaces thrown out. The operation was performed as in the former case, and three pints of purulent serosity extracted. The patient became much easier, but in the course of five days the fluid accumulated to such an extent as to render the operation again imperative. Four pints of serosity, containing an enormous quantity of pus, were extracted. to the great relief of the woman, but the skin not having been used, a small quantity of air entered the thoracic cavity. The following day there was pneumothorax. Four days later the puncture again became indicated, and about four pints of fetid pus were withdrawn. The patient died a few days afterwards. At the autopsy the lung was found firmly bound down by false membranes. The pleural cavity contained about three pints of fetid pus. Slight traces of peritonitis were found in the abdomen, and an abscess of the large ligaments.

M. Trousseau remarks that the second case, one of intense puerperal fever, with a purulent diathesis, was of so unfavorable a nature as not to give paracentesis a fair trial. In the first case the opera-

tion gave immediate relief, and was followed by nearly immediate recovery. He thinks it of great importance to keep the air out of the pleura in order to prevent the decomposition of the pus, and considers that the state of his second patient was aggravated by the omission of this precaution. In addition to the instantaneous relief produced by the subtraction of so large a quantity of fluid, M. Trousseau says that great benefit is experienced from the air, which immediately rushes down into the bronchi, breaking the adhesions which bind the lung down.—*Journal de Médecine*.

M. CASTELNAU on the Causes of Anasarca—M. Andral professes, at present, that anasarca is always occasioned either by disease of the liver, of the heart, by some other obstruction of the venous system, or by Bright's disease. This assertion is not the result of theory, but the expression of his clinical experience. He has, he says, always found dropsies which do not depend on some obstruction to the circulation of the blood to coincide with albuminous urine. M. Castelnau questions the accuracy of this opinion, and sounds his doubts on four cases of anasarca in which the urine was not albuminous, and there was no perceptible obstruction to the circulation in the heart, liver, or any other organ. In these cases the anasarca appeared to be the result of a state of anemia or chlorosis, demonstrated by all the symptoms which indicate the existence of such morbid conditions.—*Archives*.

Observations on the Treatment of Acute Rheumatism by Cinchona Bark. By JOHN POPHAM, M. D.—The cases in which it was most successfully employed were those of fibrous rheumatism or rheumatic fever properly so called. When it appeared at all probable that either the pericardium or heart was affected, the bark was not exhibited, at least until the inflammatory symptoms were checked. In capsular rheumatism the bark seemed to disagree with the acute stages, aggravating the symptoms, but in very chronic cases it seemed of service.

The conclusion at which Dr. Popham appears inclined to arrive, with regard to the administration of this medicine, are these:

"That it is important to procure due evacuations previous to the exhibition of the bark, except the patient be greatly deteriorated by constitutional debility, or the protraction of the disease.

"That it is more *quickly* successful when the disease is *early* combated by depleting measures, than when inefficiently managed at the onset, and allowed to take root in the system.

"Hence that is more likely to extinguish the disease and prevent chronic infirmity in the sequel of *first* attacks being uncomplicated, than when a habit has been formed by reason of repeated relapses.

"That the periodicity of the symptoms either peculiar to the attack, or produced by treatment, and the duration and apyrexia of the intervals, afford strong presumptive arguments for the use of bark.

"That bark is especially called for in cases where there is complete atony of the cutaneous vessels, so that the skin is unceasingly pouring out acid colliqua-

diverse sweats, giving it a dull and parboiled appearance, at the same time that the pains are abated, and the pulse small and indicating debility.

"That to produce its effects, quantity is not by any means so essential as in intermittent, and that large quantities, especially of the sulphate of quinine, derange the stomach in many cases, and bring back the fever.

"That it is judicious to administer it at the periods of remission, and stop it at the return of the exacerbations.

"That it is injurious when important visceral disease co-exists, and is especially contra-indicated in cerebral or the acute stage of cardiac complications.

"Lastly, that in the synovial variety, it is inferior to other modes of treatment; but in persons of a rheumatic diathesis, when, from the long continuance of the disease the strength has suffered, and disfiguration of the joints has occurred without serious destruction, a course of bark, combined with sulphur, &c. often prevents the recurrence of subacute attacks, and promotes the absorption of the effused synovia.—*Dublin Med. Jour.*

On the utility of Surgical Operations in Cancerous Diseases.—The grand points of this most important surgical question are to determine—1, if it be really true that Cancerous disease is primarily of a local nature, and subsequently degenerates into a constitutional malady; and 2, if extirpation, performed at an early period, prevents the occurrence of this degeneration. With the view of elucidating these matters, M. Leroy d'Etiolles has collected the following statistical observations. Of 801 operations, 117 were performed within a twelvemonth after the first manifestation of the disease.

Of these 117 cases, there were 61 in which the disease had returned at the time when the reports reached me. It is more than probable that this proportion would be found to be still higher, if we knew the actually present state of these cases.

The results of operations for Cancer of the Lip are curious and worthy of notice, in consequence of this difference in this respect observed in the two sexes. Of 633 cases of Cancer in the male subject, 165 were examples of Cancer of the Lip: of these 114 were treated with the knife—12 with caustics. There were 15 relapses in all; that is, about an eighth of the whole. On the other hand, of 2,148 cases of Cancer in the female, there were only 34 instances of the disease in the lip; of these, 22 were treated by excision; and in seven—nearly a third—there was a return of the disease.

This difference does not hold good of Cancer of the Tongue; for then the disease is equally fatal in both sexes. Of nine operations, in which a cancerous tumour of this organ was extirpated, three were performed within one twelve-month after the earliest appearance of the disease. In the other six cases, the patients died, the disease having previously returned.

As respects Cancerous diseases of the Mamma, we find the following data. Of 277 operations, 73 were performed within the last two years: as yet we cannot say positively what are the results. Of the remaining 204 cases, 22 of them proved fatal in the year after the operation, and in 87 others there was a relapse of the disease.

M. Leroy deduces the following conclusions from his researches:

1. Extirpation does not arrest the progress of Cancerous disease.

2. This operation should not be resorted to, as a general method of treatment, except for Cancer of the skin and lips.

3. There is no necessity to extirpate Cancerous disease of other organs, except when an alarming hæmorrhage supervenes.—*Comptes rendus*.

The Academy appointed MM. Roux, Velpeau, and Serres, to report upon this communication of M. Leroy.—*Medico-Chirurgical Review*.

Treatment of Hydrocele with Ioduretted Injections.—In more than 300 cases of this complaint treated with an ioduretted injection, (composed of tincture of iodine 4 parts, and distilled water 125 parts,) by M. Velpeau, not a single accident or unpleasant symptom has ever occurred. One of the patients indeed died; but the fatal result in this instance proceeded from a purulent inflammation of the cellular tissue of the pelvis, quite unconnected with the operation, and not having any communication whatever with the affection of the scrotum. The average period for effecting the cure was 15 days. In one case only the injection found its way into the tissue of the scrotum, in place of the tunica vaginalis: notwithstanding this misadventure, no appearance of gangrene supervened, and the patient recovered without any unpleasant accident.—*L'Experience. Medico-Chirurgical Review*.

Ovariectomy—Dr. CHURCHILL.—Ovariectomy is, just now, a formidable rival for fame, with Mesmerism or Hydropathy. The two former, indeed, ought to go hand-in-hand; for as ovarian tumours seldom grow in any but the patrons and recipients of animal magnetism, it would be a great advantage to those who come under the scalpel, to have its pains and penalties annihilated by the passes of an adroit mesmerist. Be this as it may, the ovarian operation can be tested only by time and statistics—the advocates and opponents steering such opposite courses, and using such ingenious arguments, as to puzzle the practitioner. Statistics will settle the question. Dr. Montgomery has gone into considerable detail on this point, and collected from various points of the compass a mass of materials that may greatly assist our prognosis—perhaps even our diagnosis, in these dangerous cases.

Dr. M. properly remarks, that, under the head of ovarian dropsy, are comprehended many swellings very different from dropsy. There may be a single—or many cysts—and the contents of the cysts may and do vary from clear serum to an almost wholly solid substance. The ovaries may consist of malignant deposits—and last, not least, they may be detached, or they may have acquired extensive adhesions to various adjacent parts, rendering a successful operation all but impossible.

Mr. Southam has published the result of 20 cases of paracentesis—ten from Bright—five from Barlow—and five of his own. Out of these, 14 died within nine months after the first operation. Of

the remaining six, two died in 18 months—and four lived for several years, from four to nine.

Of eleven cases of ovarian dropsy admitted into Guy's Hospital, seven were tapped, three of which were unsuccessful. The proposal of injecting stimulating fluids into the emptied sacs, has, we believe, either never been tried, or entirely abandoned.

The following three tables will exhibit a coup d'œil of the results of almost all the cases on record. It has been constructed with great care and labor by the able and indefatigable author.

TABLE I.—Cases of Extirpation of the Ovary.

No. and Date.	Operator.	Age	Incision.	Result.	Character of Disease.	Adhesions.
1	L'Aumonier.	..	4 inches.	Recovered.	Abscess of ovary.	
2—1809	Dr. M'Dowal.	..	9 do.	do.	Gelatinous matter.	
3—1816	do.	..	Long.	do.	Scirrhus ovary.	
4	do.	..	..	do.		
5	do.	..	..	do.		
6	do.	..	..	Died.		
7—1821	Dr. N. Smith.	33	3 inches.	Recovered.	Cyst, fluid.	Adhesions.
8—1825	Mr. Lizars.	36	Long.	do.		
9—1825	do.	35	do.	Died.		Adherent.
10	Dr. A. G. Smith.	30	do.	Recovered.	Cyst, fluid.	
11	Dr. Quittenbaum.	..	About 4 in.	do.		
12—1829	Mr. D. Rogers.	..	About 3 in.	do.	Solid and fluid.	Adhesions.
13	Dr. Granville.	..	..	Died.		
14	Dr. Chrysmar.	47	Long.	do.	Cart. and lardaceous matter.	Adherent.
15	do.	38	do.	Recovered.	Honey-like and green sanies.	do.
16	do.	..	do.	Died.		
17	Dr. Ritter.	31	do.	Recovered.	Cyst, fluid.	
18—1836	Mr. King.	57	Short.	do.	do.	
19—1838	Mr. Jeaffreson.	..	do.	do.	do.	
20	M. Dolhoff.	23	Long.	Died.	Cyst and fluid.	Adhesions.
21—1836	Mr. West.	..	Short.	Recovered.	do.	
22	do.	..	do.	do.	do.	
23	do.	24	do.	Died.	do.	
24	do.	..	do.	Not cured.	do.	
25	Mr. Hargraves.	40	do.	do.	Multiloc. cysts.	Adhesions.
26	Dr. Clay.	46	27 inches.	Recovered.	Cysts, sol. and fluid.	do.
27	..	67	14 do.	do.	do.	Ext. adh.
28	..	39	28 do.	do.	do.	do.
29	..	40	14 do.	Died.	do.	do.
30	..	22	14 do.	Recovered.	do.	Adhesions.
31	..	40	14 do.	Died.	do.	None.
32	..	43	14 do.	Recovered.	do.	Ext. adh.
33	..	59	16 do.	Died.	do.	do.
34	..	46	16 do.	Recovered.	do.	do.
35—1840	Mr. B. Phillips.	..	2 inches.	Died.		
36—1841	Dr. Stilling.	..	6 do.	do.		
37—1843	Mr. Walne.	58	Long.	Recovered.	do.	None.
38—1843	do.	57	do.	do.	do.	do.
39	do.	21	do.	Died.		
40—1813	do.	20	do.	Recovered.	do.	do.
41—1843	Mr. Morris.	..	do.	do.		
42—1843	Mr. Southam.	..	do.	do.	Cystic sarcoma.	do.
43—1843	Dr. F. Bird.	..	3 or 4 in.	do.	Cyst and fluid.	do.
44—1844	do.	..	do.	do.	Cysts and solid matter.	do.
45	Mr. Atlee.	..	3 inches.	do.		Adhesions.
46	Mr. Lane.	..	Long.	do.	Cysts, fluid.	None.
47	Mr. Key.	19	do.	Died.		do.
48	Mr. Greenhow.	29	do.	do.		do.
49	Mr. B. Cooper.	32	do.	do.		

TABLE II.—*Cases of Ovarian Disease, in which the operation could not be completed.*

Date.	Operator.	Cause of failure.	Result.	Incision.
50	Dr. M'Dowal.	Adhesions to bladder and uterus.	Recovered.	Long.
51	Mr. Lizars.	Solid and very vascular tumour.	do.	do.
52—1826	Dr. Granville.	Firm Adhesions.	do.	6 inches.
53	Dr. Dieffenbach.	Vascularity.	do.	Long.
54—1826	Dr. Martini.	Solid and fixed tumour.	Died.	do.
55	Anonymous.	Fixed tumour.	do.	
56	M. Dolhoff.	do.	do.	About 6 inch.
57	Dr. Clay.	Exten. Adhesions.	do.	Long.
58	Mr. Walne.	do.	Recovered.	5 inches.

TABLE III.—*Cases in which the Operation failed from Error in Diagnosis.*

Date.	Operator.	Result.	Disease.
59—1823	Mr. Lizars.	Recovered.	No tumour found.
60—1834	Mr. King.	do.	do.
61	M. Dolhoff.	do.	do.
62	Dr. Clay.	Died.	Uterine tumour.
63	do.	Recovered.	Hydatid.
64	do.	Died.	Pelvic tumour.
65	do.	do.	Uterine tumour.
66	Mr. Heath.	do.	do.

Thus, the entire number amounts to 66, of which 42 recovered and 24 died—or about 1 in 2½. Of the 49 cases in which the ovary was extirpated, 16 died, or 1 in 3. Of the nine cases in which the operation could not be completed, four died—or 1 in 2½; and of the eight cases where the operation was unnecessary, 4 died, or 1 in 2.

Age does not appear to have had much influence, beneficial or otherwise, and the same may be said of marriage. Adhesions render the result of the operation much more dangerous than freedom from the same, and yet not so much so as one would, *a priori*, expect. Where other organic diseases co-existed with ovarian, the termination was almost always fatal. It is strange that the operation should have been ever performed, where no tumour has existed; yet the mistake has been made by eminent surgeons, and without any negligence on their parts.

Dr. Montgomery mentions a case where he felt a distinct tumour in a female's abdomen, which suddenly vanished in the very act of

examination! The abdominal muscles, in fact, often act in such a way as to imitate organic enlargements of the liver, spleen, ovaries, &c., and thus deceive even the most careful practitioners. After many judicious remarks, cautions, and comparisons, our author comes to the following conclusions:

"Even after the details I have given, it is very difficult to come to a definite and perfectly satisfactory conclusion, because 1, we have not sufficiently accurate data to estimate the progress of the disease unaided by surgery. 2. The table quoted from Mr. Southam is clearly too limited to afford a fair average of the results of tapping, and it is not easy to obtain sufficient facts to enlarge it. 3. The cases in which ovariectomy has been performed are of such a mixed character, that it is impossible to select with fairness those cases in which the operation was demanded for the relief of urgent suffering, and suitable to the nature of the disease, without the appearance of partiality. And 4, from the obscurity of the diagnosis, it is too much, perhaps, to expect that our practice in future will be free from those drawbacks on the operation.

"But bearing in mind these difficulties, and making allowance for those drawbacks, I think we may conclude that there are cases in which the operation would be justifiable; and on these grounds,—we find the general opinion is against the curability of the disease by medical means;—that after a time the patient will die from local disease or accident, or constitutional disturbance, and that meantime she suffers more or less inconvenience;—that tapping in almost all cases affords but temporary relief;—and that, as far as the limited statistics we have adduced are admissible as evidence, it is attended with great danger: i. e. 1 in 5 died of the first operation, and of twenty patients, fourteen (more than two thirds) died within nine months of the first tapping; whilst of the entire number of those who underwent the operation of ovariectomy, about one half have absolutely recovered so far."

The foregoing paper is very creditable to the industry, the talents, and the judgment of its author.—*Dublin Journal*, July, 1844.

FROM THE LONDON LANCET.

Camphor a Preservative of Ergot of Rye.—*SIR*: I was not a little surprised to read some remarks by Mr. Rawle, stating that he had discovered camphor to be a preservative of ergot of rye. I can only say that I have been in the habit of using it for the last nine or ten years, but not exactly in the manner prescribed by him. I order the camphor to be *mixed* with the powdered ergot, in the proportion of a grain in every scruple. By this means I think the camphor is more intimately diffused throughout the whole than can possibly take place by the plan proposed by Mr. Rawle. I do not give this either as a new, or, indeed, my own discovery; for I adopted the method by having seen it in the practice of Mr. Spurgin, an old practitioner at Saffron Walden, and from whom I have every reason to believe that your correspondent also obtained the same information, he having been engaged in the same gentleman's practice.

If you think the above worthy of notice, you will oblige, Sir, yours respectfully,

JOHN N. SIMPSON, M. R. C. S. &c

Staines, August 26, 1844.

Simple Method of Preparing the Pilula Ferri Iodidi.—Take of iodine 127 grains, iron wire, about the thickness of a thin quill, half-an-ounce, distilled water 75 minims. Agitate them briskly together in a strong ounce-phial, provided with a well-fitted glass stopper, until the froth which forms becomes white, which will happen in less than ten minutes. Pour the liquid upon two drams of finely-powdered loaf-sugar in a little mortar, and triturate immediately and briskly for a few minutes; add gradually a mixture of the following powders, viz: liquorice powder half-an-ounce, powder of gum arabic a dram and a half, and flour one dram. Divide the mass into 144 pills.

Each pill contains about a grain of iodide of iron.

In operations on the large scale, the bottle ought to be wrapped in a strong towel, in case of an explosion being caused by the evolution of steam from the heat produced; and even on the small scale, the stopper must be held firmly, otherwise it will probably be blown out and the materials lost.—*Pharmaceutical Journal. Medico-Chirurgical Review.*

Rhatany in Chronic Catarrhal Ophthalmia.—M. Reveillé-Parise strongly recommends the decoction, or a strong infusion, of Rhatany root, as a lotion with which the affected eyes are to be bathed. Besides acting as an astringent, this remedy seems to have some other mode of operation; for we do not find that similar preparations of oak-bark or of gall-nuts—although both of these contain a large portion of tannin—are equally efficacious, as Collyria in the Ophthalmia alluded to. The application should be used lukewarm, and a few drops of Goulard's Extract may be added to it, if deemed proper.—*Medico-Chirurgical Review.*

MEDICAL INTELLIGENCE.

The January No. of the New-York Journal of Medicine, (just received,) contains a short biography of its late Editor, Dr. SAMUEL FORRY; and also a history of his last illness, prepared by CHARLES A. LEE, M. D. Professor, &c., and entitled, "Epilepsy terminating fatally; with hypertrophy and induration of the cerebral substance, induced by excessive mental application."

We are pleased to find that the Journal is to be continued, notwithstanding the decease of its late able Editor.

Fiske Fund Prize Questions.—The Trustees of the Fiske Fund, in Rhode Island, propose the following questions for 1844-45:—1. "The best mode of treating, and the best apparatus for the management of, fractures of the thigh." 2. "The character, causes and best treatment of bronchitis." For the best dissertation on each of these questions, the sum of fifty dollars will be paid—the dissertations to be sent, previous to May 10, 1845, to Dr. L. L. Miller, of Providence, Dr. T. C. Dunn, of Newport, or Dr. Jabez Holmes, of Bristol.—*N. Y. Journal of Medicine.*

SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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[No. 3.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Calomel—its Chemical characteristics and Mineral origin considered, in view of its Curative claims. By ALEXANDER MEANS, A. M., Professor of Chemistry and Pharmacy in the Medical College of Georgia.

Few substances within the range of the Pharmacopœia, whether we regard its history, the extent and potency of its therapeutic action, or the deep and inveterate prejudices in the popular mind with which it has often had to contend, can be considered as subjects of greater interest than that placed at the head of this article.

Its claims to antiquity cannot, it is true, be compared to those of Opium, Antimony, Sulphur, and a few other remedies whose history may be traced to the days of DIAGORAS, BASIL VALENTINE and PARACELsus, but it has nevertheless been contemporaneous with each of seven successive generations past, and at the present day occupies a conspicuous and elevated rank among the articles of the *Materia Medica*. Loudly as its virtues have been proclaimed, and its employment recommended by its friends, and vehemently as its properties have been decried and its use reprobated by its enemies within the known period of its history, still strange as it may seem, this professional altercation has not yet led to the circumstances of its origin or the name of its discoverer. It is believed to have been long known to the retired and idolatrous inhabitants of Thibet, but lay, like

themselves, hidden from the scrutiny and observation of the world, amid the deep seclusion of their own mountain fastnesses. OSWALD CROLL, in the beginning of the 17th century, is believed to have been the first European writer who *mentions* our medicine, while the first directions for its *preparation* were given by BEGUIN in the "Tyrocinium Chemicum," published in 1608. The energy of its action in the removal of formidable diseases, was, probably at that early period, well understood, as BEGUIN denominated it "Draco Mitigatus," or the Tamed Dragon. Other fanciful and cumbrous, but expressive appellations, which it afterwards wore, seem strongly to sustain this opinion:—e. g. Aquilla Alba, (the White Eagle) Manna Metallorum (the Manna, or Honey of the Metals.) Panchymagogum Minerale (the Mineral Extractor of all Humors,) &c. &c.

Mercurius Dulcis and Hydrargyri Submurias, were names subsequently given to the same preparation. The latter appellation (depending for its adoption and its currency, upon the theoretical views of the celebrated BERTHOLET, and other French chemists, who denominated the electro-negative element of the compound, Oxygenated Muriatic Acid,) maintained its place in the Pharmacopœia until the researches of Sir HUMPHREY DAVY proved it to be a simple substance, which from its yellowish green hue, when in the form of gas, he called "Chlorine," (from *Χλωρος*—green.) Since that time the several synonyms, Protochloride, Dichloride, and Subchloride of Mercury, have been applied to it by different chemists. The present popular and familiar term, "Calomel," was first used in 1655 by Sir TOURQUET DE MAYEUNE, (from *καλος*, good, and *μελας*, black,) probably because it was regarded a *good* remedy, for the removal of *black bile*, which the ancients regarded so fruitful a source of disease.

Adopting, with the latest writers and under the authority of KANE, GRAHAM, &c. 101.43 as the chemical equivalent of Mercury, Calomel must be regarded as a *Dichloride*, containing 2 atoms of the base (Mercury) and 1, of the electro-negative element, (Chloride.) A chemical classification will rank it as a Bi-elementary compound, among the Haloid Salts of Berzelius. Although Calomel is found *natural* in Germany and Spain, in white crusts as well as in the form of quadrangular prisms, terminated by four-sided pyramids, yet for pharmaceutical purposes it is prepared artificially either by *precipitation* or *sublimation*. The intended limits of the present article, however, will not authorize a detailed account of the process of manufacture as directed by the several colleges. Suffice it to say

that by precipitation it is obtained from the Nitrate of the Protoxide of Mercury in contact with a solution of the Chloride of Sodium, by which an interchange of bases takes place, and the Dichloride of Mercury and the Nitrate of Soda are the result. This process, carefully conducted, gives a pure salt. It is also procured by rubbing intimately 4 parts of the Chloride of Mercury (less recently the Bichloride) with 9 parts of metallic Mercury, and afterwards subliming. The first sublimation is not, however, sufficient to free the mass from the dangerous presence of adherent Corrosive Sublimate. It must be repeated and carefully levigated and washed with boiling water, until no white precipitate is observable on the addition of a few drops of Aqua Ammonia. All the British colleges, (varying, however, in the details of the process,) direct the trituration of metallic Mercury with the Bi-persulphate and common salt, and afterwards sublimation and elutriation. The Hydrated Sublimate of Mercury prepared by Mr. M. O. HENRY's modification of SEWELL's apparatus, by which the sublimed Calomel is condensed in the midst of steam, is in the form of a beautifully white and impalpable powder. The slight buff color, however, which frequently characterizes the officinal preparation, is favorable to the conclusion that it is uncontaminated by corrosive sublimate—although much of the pure white calomel, prepared as above, is also free from it. The color cannot therefore be regarded as an infallible criterion of purity.

It is extremely desirable that a medicinal agent to which is justly assigned so wide a range in the treatment of diseases, should not only have the mode of its action upon the animal tissues thoroughly and patiently investigated, but that it should be readily distinguishable by appropriate and convenient tests, and its chemical incompatibilities with other remedies satisfactorily understood. The experience of centuries, it is true, has not secured uniformity of opinion as to its physiological effects, and its classification, therefore, as an article of the *Materia Medica*, has depended upon the peculiar notions of individual writers, or the prevailing theories of the day. That Calomel has been placed upon the list of *Sialagogus*, by CULLEN, CHAPMAN, EBERLE, and others;—among *Stimulants*, by Dr. A. T. THOMPSON, VAYASSEUR, &c.—among *Sedatives*, by BERTHELE, HORN, &c.; while by such men as MURRAY, BROIN and GIACOMINI, it has been severally arranged with *Tonics*, *Revulsives* and *Hyposthenics*, and by others still, among the "*incertæ sedis*," only argues the valuable and flexible powers of the remedy, which under modified circumstances, is

capable of exhibiting such a great variety of effects upon the animal economy. A slight acquaintance, however, with Pharmacodynamics discovers similar characteristics in Opium. Antimony and other articles, equally embarrassing to a settled classification. The mere question of its technical position on the roll of remedies is to us a matter of minor consideration, and may be safely left for the determination of future pharmacologists, but its intrinsic energies and past achievements have certainly distinguished it as a powerful auxiliary to the ranks of restorative agents. Nor have its virtues fled, nor its claims upon a benevolent and intelligent profession been extinguished, because interested ignorance, or popular charlatanism in their temporary ascendancy, and within limited circles, may have defamed its character and withheld its rights. No, verily—the spirit of virtuous heroism glowed as brightly in the noble soul of the *American Frenchman*, when in the dungeons of Olmutz, and the sympathies of the generous and good clustered as warmly around him, as when he moved side by side with his great compatriot in arms, the immortal WASHINGTON, and received a nation's homage.

We design, however, to indulge in no acrimonious invectives against those who *honestly* differ from the views here designed to be expressed. Far from it. We appeal to sober Reason, and in canvassing the following questions, only ask an impartial decision at her bar.

1st, then :—Is Calomel to be ranked in the category of *poisons*?

That Mercury in this form, under an ill-timed and injudicious administration—by unwarrantable exposures on the part of the patient, or unjustifiable indulgences on the part of the nurse—and still more rarely, by an unsuspected idiosyncrasy of constitution, may once, perhaps, in 500 cases, overpass the boundaries of its usual and healthy action, and leave traces of its violence long and deeply to be regretted, no reasonable advocate of its use will deny. But what other active remedy, vegetable or mineral, may not, under similar circumstances, lead to like unfortunate results. Each, it is true, may according to its peculiar properties, act upon different organs, or tissues, but the morbid impression, or over-action generated, being equally injurious. What practitioner has not known, Gamboge, Scammony, or Podophyllum peltatum, in certain instances, to produce exorbitant and prostrating catharsis, from the effects of which the after administration of opiates or stimulants could with difficulty save the patient? How often, too, has the specific action of the Tartrate of Antimony

upon the coats of the stomach, resulted in excessive emesis, followed by dangerous, if not fatal exhaustion of the powers of life. And yet these remedies maintain their claims upon professional regard, and occupy a respectable position in the catalogue of medicines. Indeed the mere fact that diseased action, under given circumstances, may follow the contact of *solids, fluids, or gases*, with either the internal or external portions of the human organism, is no proof of the poisonous effects of such agents. If this position be admitted, the thousand luxuries of modern tables must submit to the ostracism of professional authority, nor will even *roast beef* and *pudding*, be suffered to retain their places upon the landlord's bill of fare; for where temperament and diathesis have favored cerebral engorgement, many an apoplectic has met his fate by epicurean indulgence.

Fruits, too, must be classed with the list of poisons. The grateful juice of the luscious plum, and the delicious nectar of the blushing peach, both fall under the ban of this decision, for imprudent gratification here, has been often succeeded by Cholera Morbus, Diarrhœa, or Fever. But the very *water* we drink must be proscribed; for large, cold draughts, taken into a heated and exhausted system, has often produced fatal effects. Nay, this is not all—the use of the bland *atmosphere* we breathe must be interdicted, for Catarrhal fevers, Croup and Pneumonia have often resulted from sudden and untimely exposure to its currents. Nor should indiosyncratic temperaments be allowed to decide this interesting question. The writer is intimately acquainted with a gentleman who cannot, with impunity, partake of one of the elements of the Holy Sacrament—the *mere morsel* of wheat bread, presented on such occasions, acting like *poison* upon his stomach; and yet, surely the toxicologist, as well as the epicurean, would scout the philosophy which should attempt gravely to label the *baker's loaf*, with the alarming epithet "*Poison*." He has known another who was instantly sickened by the smallest quantity of the albumen of an egg, even when tasted in the coffee which it had been employed to clarify:—still this isolated case of injury would never authorize the popular voice to sanction the expulsion of so innocent and nutritive an article of diet from the list of aliments. These remarks are designed to be made too, in full view of the unfavorable reports made in former years by such writers as HOFFMAN, VAGNITIUS, HELLWEG, and others, where in a very few instances even small doses are said to have proved fatal, but whether under circumstances of neglect or aggravation, or by the administra-

tion of an improper article, cannot now be ascertained. It is at least a plausible conjecture, advanced, perhaps, first by Dr. CHRISTISON, that where such cases have occurred the Calomel may have contained Corrosive Sublimate, a conjecture warranted by the fact to which the reader will recur, that according to one of the formulæ given above, the latter article has been long and largely employed in the manufacture of the former, and can only be removed from it by careful and repeatededulcorations. Surely, however, the congregated testimony of hosts of intelligent physicians in later years, and the reports of multiplied thousands of cases, more than sustain our individual opinion long since formed, i. e. that "*Calomel deserves to be classed with the mild preparations of Mercury.*" It has been amply tested that in *small* doses, either alone, or in combination with opium or other adjunct, it acts as a safe alterative,—checking violent purgatives—correcting hepatic derangement by promoting the biliary secretion, and overcoming obstinate chronic diseases of the cutaneous surface ;—while in *large* doses, it often acts the part of a sedative—quiets gastric irritation—stops vomiting, and moderates debilitating catharsis in some of the most alarming and fatal forms of disease. At the Cholera Hospital, Bethnal Green, London, Mr. CHARLES BENNET had 18 cases of Cholera introduced to his treatment. The first administration was 160 grs. of Calomel, immediately given, and 60 grs. at the interval of every one or two hours afterwards, until some effect was produced. The result was, that in 17 out of the 18 cases, "vomiting and purging diminished, and the patients recovered." In the unsuccessful case just alluded to, "53 *drachms* of Calomel," says Dr. PEREIRA, "were administered within 42 hours without the least sensible effect." To one patient (a female) 30½ drachms (1620 grs.) were administered in 48 hours, producing only a moderate ptyalism and followed by recovery. Mr. ROBERTS, of London, reports a case where *one ounce* of Calomel was taken by mistake, and "retained on the stomach two hours before the error was discovered." The only unpleasant effects which supervened were "slight nausea and faintness,—but by the application of lime water, emetics and purgatives, the mass was thrown off, and on the second day afterwards "the patient was quite well."

Dr. GRIFFIN asserts that in 1448 cases, when given in doses of from one to two scruples, every 30 or 60 minutes, and before the stage of collapse, "it proved a most successful remedy, controlling or arresting the progress of this formidable disease in the ratio of 84 cases

out of 100." Dr. DAVID M. REESE, one of the most successful practitioners in the professional field during the ravages of this epidemic in the city of New York, in 1832, depended mainly upon the administration of large doses of our medicine in connection with ice-water, for the numerous cures affected under his care. Indeed the conjoint testimony of almost all writers upon the spasmodic Cholera, as it has prevailed in India, Europe, or America, has sustained the use of Calomel as a safe and effective remedy, while, so far I know, no writer of any distinction, either cis or trans-atlantic, has ventured to charge upon it injurious consequences, much less to anathematize it as an "irritant poison." But its safe and efficacious action in the disease above referred to, may have been made unnecessarily conspicuous. Its claims are equally strong and its triumphs equally decided in a large range of morbid affections, to which its diversified characteristics so happily adapt it. It cannot, must not be confined to the exercise of mere tetrarchical functions over a petty province in the vast dominion of medicine. It wears and wields princely prerogatives, gives ample evidence of its power to rule, and consociated with a few other leading and active agents of the *Materia Medica*, constitutes that Oligarchy of medicinal power, in which alone the profession can confide for the suppression of some of the most formidable rebellions against life and health, which Disease has ever generated in the human system. Other valuable remedies have their intrinsic merit, and occupy important positions as auxiliaries in this grand allinement for constitutional defence, yet few are capable of occupying so wide a field of action, or destined to accomplish so much. In contemplating the noble spirit and invincible heroism of the indefatigable NEX, the foremost in the achievements of the army upon the Rhine, and the "bravest of the brave" on the memorable field of Hohenlinden, my heart recoils with an honest indignation at the cold-blooded cruelty, which presents that manly bosom as the public target for the muzzles of a score of French musketeers, simply because the *Bourbons are in power*. Now, although from the nature of the subject, similar sympathies cannot be involved, yet something like a kindred aversion is excited against that ruthless policy which (from motives best known to those who advocate it,) would strike forever from the roll of medicinal honor, an agent signalized so long for its energy and its success, and to which, under Providence, the writer has been, at least *once*, indebted for his life.

But again, in organic bodies the laws of chemical affinity are held

in subordination and control by the vital forces, and in the human body, although these affinities still exist, yet all combination with foreign elements, hostile to the health of the several organs and the harmony of their movements, are steadily and successfully resisted, and it is only where the attraction between foreign agents and the tissues of the living organism, is stronger than the resistance of the vital principle, that the equipoise is destroyed, and temporary or permanent functional or organic derangements supervene.

Medical substances therefore, whether organic or inorganic;—whether acting *topically* or *generally*, and *remotely*—by mechanical irritation—by chemical combination with some of the constituents of the tissues, or in the production of what has been denominated “vital effects,” apparently unattended by either “mechanical or chemical lesions,” must always, we apprehend, to be safe and efficacious, be subordinate in their action to the existing affinities which bind together the elements of the corporeal organism, under the superintendency of the vital principle. While, however, on the one hand an increase of *mass*, even of a *mild* agent, may compensate for the want of *intensity*, and overcome the resistance of the vital forces, so as to terminate fatally;—so, on the other, *minuteness* of quantity or high *dilution* is an equivalent for *blandness* of quality in the agent employed, and reduces its action below the force of the vital affinities, so that even acrid and virulent poisons, by only feebly disturbing the organic activity, of the parts, and establishing a new and different action for the morbidly existing one, may, under judicious administration, be made to subserve valuable purposes in the curative art. While, therefore, under the scrutiny of an enlightened medical philosophy, it would be deemed no less fruitless than futile to attempt a defensible line of contradistinction between those substances popularly denominated “poisons,” and others, by common consent denominated “medicines,” yet, it is proper to remark, that there are many chemical compounds, both from the organic and inorganic kingdoms, which produce violent changes in the living organism, and which, if continued to a certain intensity, result in the death of the part or the whole. The action of inorganic poisons, as the salts of lead, copper, and several other metals, are only to be satisfactorily accounted for upon the adoption of the views of LIEBIG, viz: that the powerful affinities which they manifest for some of the constituents of the animal organism, as muscular fibre, albumen, cellular tissue, &c. is such as to break down the vital energies of the part, and form a new

and insoluble compound which henceforth refuses to "suffer, or effect" metamorphosis or transformation, and is therefore removed beyond the claims of animal life—no longer subject to its laws, and therefore no longer sustainable among the living tissues. Such are Arsenious Acid, the Corrosive Chloride of Mercury, Nitrate of Silver, &c. either in solids, or in blood-globules, and if the calculations of the same celebrated chemist are correct, the very high atomic weight of these several animal products, or, in other words, the *large* amount of them which it takes to constitute a single equivalent for a *small* amount of the salts in question, indicates clearly how *very few* grains of the two former salts especially, may prove fatal. He supposes that 5 grs. of Corrosive Sublimate, unites as the lowest equivalent proportion, with 100 grs. of fibrine, and $1\frac{1}{2}$ grs. of Arsenious acid with 100 grs. of albumen. Ordinarily, however, the toxicological effects of each agent is limited to their degree of solubility. In accordance with this physiological law, therefore, the timely administration of Sulphates (as Sulph. Soda, Sulph. Magnesia, &c.) constitutes the only safe antidotal policy for poisoning by the soluble Salts of Baryta, (as the Carbonate, Muriate, &c.) the play of affinities which takes place in the stomach, resulting in the formation of an insoluble Sulphate of the metal, at once preventing morbid action, and averting all danger. Indeed, the Hydrated Sesquioxide of Iron itself, the great modern antidote for Arsenious Acid, whose invaluable efficacy has been thoroughly tested in scores of cases, depends solely for its success upon the formation (in the stomach) of the *insoluble* Arseniate of the Protoxide of Iron, which, refusing to enter the circulation or combine with the tissues, secures the system against a fatal result. Another class of substances, such, for example, as Sulphuric Acid and the Caustic Alkalis, which the distinguished Professor of Giessen has forbore to denominate "poisons," nevertheless, by a sort of chemico-vital process act, *first*, destructively upon the organization of the parts with which they come in contact, by their energetic affinity for *water*, which, according to MILLER, constitutes "four-fifths of the weight of the animal tissues," and without which the vital phenomena dependent upon them, cannot be continued. And, *secondly*,—by instituting an inflammatory action in the adjacent surviving parts. Now under these authorized views of the action of inorganic poisons, we do not feel warranted to class among them, the article under consideration:—

1st. Because, we have shown, we trust, by reference to sufficient

written authority which might be quadrupled at pleasure, and to which we now add the testimony of our own experience for the last 18 years, sustained, as we believe, by that of almost the entire body of the intelligent and scientific members of the profession in the South, (to many of the peculiar and violent diseases of which our medicine has proved to be happily adapted, and where its powers have been most largely tested)—that the Subchloride of Mercury, under the direction of proper professional skill, may be given in *small or large doses, singly or repeated, with equal impunity.**

2nd. Because, instead of acting as an *irritant* upon the mucous coat of the stomach, it is known to act like a charm, in allaying that gastric irritability which constitutes one of the most troublesome symptoms in many of our autumnal diseases.

3rd. It does not, like the Corrosive Chloride, &c. combine with the organic elements of the tissues—overcome the vital affinities of the parts in which it acts, and generate inflammation in contiguous surviving parts.

4th. Its great insolubility resists the process of imbibition, and consequently transfusion through the circulating mass—the ready medium through which inorganic poisons ordinarily act. So nearly insoluble is it, that according to GRAHAM, of London, “when the Mercurous Nitrate” (Nitrate of Mercury) “is added to Hydrochloric Acid,” (by which Calomel is generated,) “diluted with 250,000 times its weight of water, a *sensible* precipitate of Subchloride of Mercury appears.”

But,—“*Are not mineral substances, unsafe and improper remedies, and therefore to be prohibited in the treatment of disease?*” Perhaps with the enlightened and unprejudiced mind this question might be regarded as scarcely meriting a philosophical examination, and were it not that a class of professional teachers, differing from ourselves *toto cælo* in the etiology and *methodus medendi* of disease, have repeatedly pronounced *ex cathedra*, as well as in private intercourse, their burning anathemas upon our hapless salt,—denouncing its pretensions to public confidence under the broad, ungenerous charge, that it could not boast a *botanical ancestry*, and spurning it, with every kindred article, of mineral origin, as an illegitimate, and mur-

* Idiosyncratic cases are of course excepted, and from what has already been said, should not subtract from the force of our remark.

derous intruder into the family circle of remedial agents—the public eye would not have been taxed with the perusal of the following reply. To the thoughtful and dispassionate, whether *theoretically* with, or against us, the views which it presents are ingenuously submitted.

However physiologists may speculate upon the *modus existendi* of the vital principle, life itself must be regarded as a constant struggle against the operation of those physical laws which effect matter in its inanimate and passive forms. The human body itself, presents an instance of a temporary, but triumphant ascendancy of a vitalized organism over a thousand active and widely pervading agencies, hostile to its perpetuity. The presiding Spirit of the living machinery, within the circumscribed range of its dominion, modifies and controls those chemical laws which give form and character to inorganic matter, and makes them subservient to her own high purposes, while the powerful momentum of the vital forces keeps at bay, for the time being, those multitudes of external assailants, which like the beleaguering hosts of the Roman Titus, around the venerable walls of doomed Jerusalem, never raise the siege until the last energies of the physical constitution are exhausted, and its beauty and strength both fall victims to their morciless power.

Our corporeal organization, then, is liable to assault from every quarter. The Earth itself, by the great law of the attraction of gravitation, continually tends to draw our bodies towards its centre, and our erect attitude is only maintained by the expenditure of a countervailing vital energy acting upon muscular irritability. The stagnant lagoon evolves its invisible mephitic gases, and the ready winds, commissioned for the work of death, transport them to our lungs. The serpent, the tarantula, and the rabid mastiff, each injects its destructive virus to dislodge the vital principle. Botany too, often lends the agency of its juices, fruits, and foliage to disturb the balance of the harmonious functions, and speed us to our doom;—while *Mineralogy* but joins the general crusade against the human existence, and furnishes her Acids and Alkalis, Metals and Salts, which by careless or malignant administration, may break down the resistance of the vital forces, and destroy life. But this is not all:—The skies drench us,—the lightnings blast us, or the floods drown us. Shall then the wonderful and complicated structure of the human body—the organ of communication between an immortal mind and the surrounding universe, and on whose soundness and preservation that mind depends for every earthly manifestation of its powerful

emotions, lofty conceptions, and far reaching energies, be thus subjected to injuries from *earth*, and *air*, and *sea*, and *sky*:—from *solids*, *fluids*, and *gases*—animals, vegetables, and minerals;—from enemies *visible*, and *invisible*—*LIVING* and *DEAD*,—and yet its hygienic and therapeutic resources be restricted to the narrow limits of *any* kingdom, or *any condition* of matter, much less to the exclusive and fanciful formularies of *any* professional dogmatist? No, verily, No. The voice of Reason and the voice of Nature both unite in this response. Let aid come to suffering human nature then from the four winds of Heaven. The world *belongs* to it, by merciful conferment. Earth's millionary treasures were made tributary to its use and comfort, and with this mundane system its very temporal being, happiness, and history are inseparably identified. We repeat it, then, let remedies come—no matter *whence*:—from *forest*, *field*, *fen*, or *fountain*;—from mountain *height*, or ocean *cave*;—from earth *beneath* or heaven *above*. Let them come—no matter *how*:—*solid*, *liquid*, or *aeriform*,—*ponderable* or *imponderable*, until they cease to present any appropriate characteristics for the rescue of humanity, and *then* and not *till then*, may they forbear. But to be more specific in the expression of our views upon the propriety and reasonableness of employing mineral agents in the cure of disease:

1st. The same elementary substances, as (e. g.) Oxygen, Hydrogen, Nitrogen, and Carbon, are found in *organic*, as well as *inorganic* matter, and are only combined, in each respectively, under different modifications. Now, inasmuch as no remedy, animal or vegetable, is taken in a *living* state into the human stomach, the power of the vital principle is no longer exerted in controlling the chemical arrangements of its particles, and it then becomes subject to the laws which govern inorganic matter.

2nd. *Some* minerals are *known* to be innocuous, when taken into the human stomach, as Magnesia, Chalk, Sulphur, &c. and *one*, at least, has become an article of such popular use in the preparation of human aliment, in every grade of society which is removed from downright barbarism, as to constitute a sort of national test by which to distinguish civilized from savage man. And yet who would denounce the Chloride of Sodium (common salt)—expel it from our tables—return to the rudeness of savage taste, and eat the half-broiled flesh from the reeking coals, unseasoned by this grateful condiment, simply because it is dug from the mines of Cracow, and crystalizes in the form of cubes?

3rd. Calomel itself is an analogous compound :—nay, more,—for it is only necessary that the negative element of the Chloride of Sodium, viz. Chlorine, should exchange its metallic base (*Sodium*) for another metal, (i. e. *Mercury*)—two equivalents of the latter base, being united to one of the former, and we have the important salt which has elicited this dissertation.

4th. The animal fibre is powerfully impressible, and the various organs promptly and signally modified in their action, by mineral remedies. Now whatever agents are known to exert an efficient control over functional movements, may, under a judicious and discriminative administration, be made valuable auxiliaries in the work of cure.

5th. But is it not a virtual impeachment of the Divine wisdom, to denounce this *whole class* of substances as injurious to the animal organization, when both the *fluids* and *solids* of that structure, furnish *minerals* as a portion of their elementary constituents? What intelligent physician has yet to learn that *Lime* (a *mineral*) in combination with phosphoric Acid, is found in the cellular, serous and muscular tissues, and in the *brain* itself?—that from the most careful ultimate analysis of the *human blood*, *Magnesium*, *Calcium*, *Sodium*, and *Iron*, (*all minerals*—the last in the form of a peroxide and Phosphato) are constituent elements of that fluid, and going the constant rounds of the circulation?—that the whole osseous skeleton of the human body consists of little else than *inorganic* salts, deposited for the time being in a cartilaginous network of appropriate conformation, and all of which may be removed by digesting bones in dilute Muriatic Acid, while the cartilage alone remains in situ. One of these circulating salts too (Carbonate of Lime) is the same which constitutes the bulk of many of our mountain ranges, and in the form of *statuary marble*, withstands the waste of ages and gives immortality to deeds and men. The renal secretion, also, as might have been anticipated, contains these saline impregnations, and some of the most common forms of urinary calculi consist of the Oxalate or Phosphate of *Lime*.

6th. Nature seems to have imposed no interdict, preventive of a rigorous reaction and chemical union between the several elements of animal, vegetable and mineral substances, and we therefore rationally infer, that the *three kingdoms* were designed to contribute to the resources of the profession.

The Chloride of Mercury (Corrosive Sublimate) combines with

Albumen (*animal matter*) and forms an *inert* and *harmless* compound, and hence the white of an egg is the best antidote to the action of this virulent salt.

The proximate principle of *vegetables* unite with minerals, as the Tartaric Acid with Antimony and Potassa, forming the Tartar Emetic of the shops:—the Citric Acid with Iron, making the Citrate of Iron; and, as recently discovered, the still more complicated, but beautiful and valuable compound, the Citrate of Quinine and Iron, in which a *vegetable* and *mineral* base, conjointly submit to the action of an Acid from the organic kingdom.*

7th. Again, the mere fact that a medicinal agent is obtained from the *vegetable* kingdom, is no guarantee for its innocence or usefulness, while the converse is equally true, i. e. that a *mineral* origin is no presumptive evidence of deleterious properties, and should not, therefore, vitiate its claims to public confidence. For while the Vegeto-Alkalis, Strychnine, Brucine, Veratrine, Conicine, Atropine, and Daturine, with a host of other organic agents, among which may be ranked Hydrocyanic Acid, and the active principles of Opium and Tobacco, furnish some of the most active and virulent poisons on earth,—many *mineral* substances employed for ages in medicine are *known* to be exceedingly mild and harmless, as well as appropriate and useful in the cure of diseases. Such, for example, are Sulphur, Chalk, and Magnesia, with its compounds, i. e. the Carbonate and Sulphate:—Soda, in the forms of the Sulphate and Phosphate;—and Iron, as a Protoxide, or Carbonate, &c. &c.

8th. But lastly. Nature has settled this great question, and from her own granite alembics in the base of the “everlasting hills,” has distilled her own pure waters, and richly impregnated them with the healing properties of her own subterranean resources. Chalybeate, Sulphureous, and Saline springs, with their respective minerals in ready solution, gush freely from a thousand localities over the earth’s surface, to heal the maladies of our afflicted race.

In conclusion then, with these facts before us, and the powerful and effective energies of our mal-treated remedy freely acknowledged, shall we, because in careless and injudicious hands, or in idiosyncratic temperaments it may have occasionally overleaped the pre-

* This fine purplish brown salt, in tabular crystals, with a vitreous lustre, may be found in the Drug store of Mr. Marshall, the successor of Dr. Wray, Augusta, Ga.

scribed bounds of its therapeutic action, and done violence to the human constitution,—consent to cower to the out-cry of blind prejudice, or ignorant and interested empiricism, and, before the eyes of the living myriads whom it has rescued from the jaws of the grave, deliberately pronounce the blistering curse of Science upon its head, and consign it to the reproach and maledictions of posterity? No, never!—Sooner let the fate of the lacerated and engulfed multitudes, who have fallen under the explosive power of uncontrolled Steam, and found their winding sheet in the ocean wave, authorize the utter expulsion of this great agent from the civilized world, when ten thousand burning axles are rolling under its impulse and bearing with the speed of the winds, the exchanges of intelligence and commerce to rising and expectant nations. And yet who is prepared for such a national sacrifice?—None. The voice of Civilization is the voice of Reason, and the world obeys;—hear it:—

“Study more profoundly your science—strengthen your cylinders,—modify your machinery, and increase your circumspection, but, still retain **THE MASTIDON IN HARNESS**, to do the work of an **AGE** in a **YEAR**.”

NOTE.—Having concluded our general views in regard to this interesting article of the *Materia Medica*, it has been thought desirable to append a few practical observations which may be made available in *detecting its presence or asserting its purity*.

Properties. Its *specific gravity* is about 7.2, i. e. its weight compared with an equal bulk of *water*, is as 7.2 to 1.

By exposure to light, even in closely stopped glass bottles, it acquires a darkish tint—the chemical constitution of the change thus produced, not being well understood. We cannot believe, however, with *Dumas*, that it depends upon the formation of a small quantity of the Corrosive Chloride and the deposition of Metallic Mercury, but should rather suggest (were our own opinions to be consulted, that from the chemical activity known to be imparted to Chlorine by the action of light, a portion of that negative element of the compound, was dismissed and minute particles of Metallic Mercury deposited on the exterior stratum of the mass.

Tests. To ascertain *first*, whether an article supposed to be Calomel, be a *mercurial* preparation, heat it with one of the vegetable alkalis, or their carbonates, and if mercury be present, small globules will appear.

Or: Digest it with Nitric Acid, and then rub it with a woollen cloth, or buckskin, upon a bit of *clean copper*—if the metal be there, a silvery stain will be left on the copper, removable by a red heat.

Next, to ascertain whether the Mercurous salt thus detected be Calomel, ascertain first, whether it is insoluble in *water*.

Secondly, whether with Aqua Ammonia, or Caustic Potassa, it strikes instantly a blackish, or with Lime water, a blackish gray precipitate—which if produced, is the *Protoxide of Mercury*, while the supernatant liquor containing the dislodged chlorine in alkaline solution, with Lunar Caustic, will give a white precipitate (the Chloride of Silver.)

Other tests might be added,—these we trust will suffice, and, to show the value of such tests in determining the chemical characteristics of the article under examination, I close by remarking, that my esteemed and lamented friend and former partner, Dr. WM. P. GRAHAM, of Covington, Ga. once purchased from a store in the village a considerable quantity, perhaps $\frac{1}{2}$ lb. of an article labelled 'Calomel,' and which from a superficial examination, he supposed to be such.—Before attempting to use it, however, after returning to his office, he determined to subject it to the action of an Alkali. To his surprise, no blackish precipitate appeared. He saw me some days afterwards and requested me to examine it in my laboratory. I did so, and by the most decisive tests, found the white mass to be *Arsenious Acid*.

ARTICLE II.

*Cases of Episiography.** By JOHN LAKE, M. D., of Edgefield District, S. C.

Having received, through my pupil, Mr. JAMES HILL, now in attendance on the Lectures in the Medical College of Georgia, a request from the Professor of Midwifery, Dr. J. A. EVE, to communicate

* Epision, external labia; and raphe, suture.—EDTS.

for the Southern Medical and Surgical Journal, two cases, in which I had performed successfully the operation of Episioraphy, I will with pleasure place them at the disposal of the Editors; although in presenting Mr. HILL, from my journal, a rough sketch of these cases, to assist him in preparing a thesis which, as a candidate for graduation, he would be required to present to the Faculty, I little thought my cases would be regarded, in so flattering a light, as to call forth a desire to have them laid before the public.

When about to enter the practice of medicine, which is now fourteen years since, as is common with all young men, I commenced with sanguine expectations, thinking the profession had approximated much nearer to perfection than I now conceive it to be: I figured to myself, that nothing was more certain than that success must follow the theoretical views of the celebrated authors which I had read, when applied to practice: but as much as I respect the profession, and as high as I think medicine deserves to stand among other established sciences, I still recollect the mortification I felt, when I first became practically acquainted with the many cases which baffle the best directed efforts of the attentive and well read physician, and in this catalogue, to my astonishment, the case of prolapsus uteri as often presented itself as any other.

Professor DEWEES, to whose memory the ladies of Philadelphia justly owe the monument, which they proposed to erect as a feeble tribute of respect for the able counsel and prompt aid which he was ever ready to render to their sex, taught in his lectures, which I always attended with unusual interest, and his works, which I have ever since continued to consult, that this malady is certainly controllable by the common metallic concavo-convex pessary.

As much as I think DEWEES merits the reputation which he has acquired as an author, and as unsafe as I conceive it to be to differ from him, upon topics generally connected with the subject of midwifery and the diseases of women and children, yet I must enter my humble protest against this proposition. Admitting what is true, that his views on its pathology are correct, I must yet contend that his treatment based thereon is improper: for if a relaxed or weakened vagina be the proximate cause of a large majority of displacements of the uterus, the reasonable inference is, and a considerable practice in this line has convinced me the idea is correct, that any hard body placed in the cavity of the vagina, with a view to support the uterus, must be sufficiently large to distend, very considerably, the parietes

of the vagina, which distension, if persisted in, must eventually lessen the tone of an already debilitated organ, so as to render the probability of a radical cure at least doubtful, without an operation.

With this view of things, my treatment for a length of time has been to enforce rigidly the horizontal position, if necessary, for weeks or months, and at the same time to persist in cold and slightly stimulating lotions to the vagina, and such constitutional measures as have a tendency to impart tone to the system generally. With this treatment I am entirely satisfied.

As for those extreme cases which cannot be greatly improved or entirely cured by the above treatment, I have reason to believe they will not be made better, by any treatment short of the operation which Dr. DREWES denounces in such unmeasured terms, and which I will give as performed in two instances in my own practice.

The first case is that of Mrs. D., who, when the operation was performed, was about forty-three years of age. She had, for at least twelve years previous to that time, been the subject of prolapsus uteri, the latter half of which time she had been confined to bed. The constitutional derangement growing out of this disorder, frequently seemed to require more attention than the prolapsus itself; for her sufferings from nausea, gastrodynia, cardialgia, a sense of weight in the stomach and very evident distension of the bowels, almost uninterrupted fetid eructations, pyrosis, a sensation of sinking or fluttering at the heart, &c., were so great as frequently to induce the belief, not only with Mrs. D. and her friends, but with her physicians also, that under this state of things she could not long survive, and sincerely do we believe that death by her was looked to as her best friend. Mrs. D.'s case was successfully and no doubt correctly managed, by several intelligent physicians. During the illness of the last physician in attendance, we were consulted and requested to prescribe for her: we in turn recommended the usual treatment, such as the application of the pessary, accompanied with astringent washes, at the same time combating the constitutional disturbance which had supervened, with no better success than our predecessors; we became chagrined, almost ready to look upon procidentia uteri as belonging to the opprobria medicorum, and we were about to pronounce it a hopeless case, when the operation termed by some *Episiography*, was suggested to us by a friend, as a last alternative. We proposed it (though we confess, with little hopes of success) to our patient, who readily submitted to the operation; which was performed, by denuding the ex-

ternal labia, commencing something more than a finger's breadth below the superior commissure and also about the same distance from the margin of the labia, extending the incisions which were at least half inch in breadth, to the fourchette which was included. The raw or cut surfaces were then kept in apposition by the quill suture. For the first few days after the operation, the urine was drawn off by the catheter, which it was apprehended, if passed in the natural way, might prevent adhesion of the parts. In a few days after, our most sanguine expectations were more than realized; for notwithstanding from want of action in the system generally, adhesion did not take place to the extent we wished, yet there was a degree of rigidity brought about, in the parts, which effected a radical cure in a short time. Her general health began to improve, the symptoms of dyspepsia were gradually removed, and all the train of nervous affections attendant upon an aggravated case of prolapsus, was soon gone. In a few months she was so far recovered as to visit her friends in Alabama. Since when, (which was in the latter part of the winter of 1841,) she has enjoyed good health, and not suffered with a trace of her former complaint.

The second case was a negro woman, who had been confined to bed for the space at least five years. She had had the benefit of the judicious application of the different pessaries in vogue, none of which offered her sufficient relief to enable her to follow any kind of business: in fact she was completely bed-ridden, and had been for the time already specified. She was regarded by her owner as a nuisance. Encouraged by my success in the case of Mrs. D., and wishing to give the operation a still further trial, I proposed to her owner to take charge of her case, and if her situation was not greatly ameliorated, my attention should be given free of charge. He consented: her case was conducted in a manner similar to that of Mrs. D. and the like happy consequences resulted; for in a few months (which is now near two years,) she was returned home and placed in the kitchen as a cook for a large family, which post she has occupied ever since.

ARTICLE III.

Fifteen Cases of Lithotomy. By P. H. WILDMAN, M. D., Columbus, Ga.

Within the last five years, it has fallen to my lot to operate in fifteen cases of stone in the bladder.

One of these cases was that of a female about 30 years of age, from whom a calculus, measuring, in its longitudinal circumference, four inches, and in its shortest, two and three quarter inches, was extracted through the urethra, previously dilated. The instrument used for dilating, was made of steel, and constructed so as to open on the principle of the speculum auris—the blades standing at a right angle with the handles, and about three inches in length. It was constructed by a blacksmith in the village where I then resided. This instrument was passed through the urethra, and its blades separated with moderate force, for the space of ten minutes, every other day, during ten days, previous to extraction. On the tenth day the patient was placed on the table, a middling sized lithotomy forceps carried into the bladder, the stone seized and extracted easily. The patient had a rapid recovery—having had from the first hour, no incontinence of urine.

By means of the dilator above described, dilatation of the female urethra may be carried to a much greater extent than sufficed in this case; and if desirable, effected in the space of a few hours. In view of these facts, and when I reflect that incontinence of urine is a frightful, and almost inevitable consequence of laying open the female urethra, and that the high operation is both difficult and dangerous, I can scarcely conceive of a case of calculus in the female, in which I would not recommend the operation by dilatation, above any other which has been devised.

The remaining fourteen cases occurred in male subjects, and the calculi in all of them, were extracted through bi-lateral incisions of the perineum and prostate gland. The following is the method in which I have executed the operation :

The patient is secured as for the lateral operation. The bladder is injected with tepid water, unless the urine has been retained for

several hours. A staff, larger than that in general use, and with a deeper and broader groove, and also with a shorter curvature, is carried into the bladder, and its handle consigned to the right hand of an assistant, (standing on the left side of the patient,) who is directed to elevate the scrotum with his left hand. With three fingers of his left hand placed over the anus, and their extremities resting on the perineum just below the inferior border of the triangular ligament, the operator makes the first incision, through the skin and superficial fascia, with a scalpel held in his right hand. This incision is made of a semilunar shape, its centre on the median line, its convexity looking towards the scrotum, and its horns resting on a point midway between the anus and tuberosity of the ischium on either side. The dissection is continued in the line of the first incision, till the membranous part of the urethra is exposed, just below the bulb. An opening, half an inch in length, is made into this part of the urethra, with a scalpel or bistoury, and the beak of Doct. ALEXANDER H. STEVENS's "*prostatic bi-sector*" inserted through it into the groove of the staff. The handle of this latter instrument is now taken from the assistant, and the bi-sector gradually carried forward through the prostate into the bladder.

"The *prostatic bi-sector* "in form resembles an olive, with a beak at its extremity, with cutting edges at its sides, parallel to its longest axis, and with a straight handle." I have, in my operations, used three sizes of this instrument. The blade of the largest is one inch in its longest transverse diameter—of the smallest nearly three quarters of an inch—the other is intermediate. Not more than one-third of the blade is exposed—the remainder being covered, above and below, with bulbs of polished horn.

It is not my intention or desire, to laud this method, or this instrument, above all others in the operation of Lithotomy: but merely to add my mite to the general experience, upon a subject so deeply interesting to the profession and to mankind. Still, I cannot refrain from expressing the belief, that the bi-lateral operation is safer for the patient, and easier for the surgeon, than the lateral. This opinion is sustained, no less by the anatomy of the parts concerned in the operation, than by my own experience and the testimony of others.

Of my fourteen cases in the male subject, two were cut in the month of January, two in April, one in May, one in July, two in August, four in September, one in October and one in November.

The youngest was three years of age—the oldest, seventy-one; nine were between three, and twenty—three, between twenty and forty.

Seldom have my patients been subjected to any preparatory treatment. I have several times operated in the midst of a paroxysm of greater or less severity, and these patients have recovered as rapidly and as perfectly as the others. I have operated upon all who have made application to me, except one. This patient was confined to his bed and so much debilitated as to become pulseless under the operation of sounding. Besides this, I suspected that the calculus was encysted, or had lodged or been formed in the vesical extremity of the left ureter—about one-third of it only projecting into the cavity of the bladder.

Of the fourteen patients, all have permanently recovered, except one, who died in five weeks after the operation. This patient was seventy-one years of age, corpulent, and had enlargement and induration of the prostate gland. Eight friable calculi were removed—two or three having been previously fractured in the bladder. The difficulty of removing these fragments through an indurated prostate, and deep perineum, from a bladder *pushed* high up into the pelvis, by an enlarged prostate, may be easily conceived. I left the patient in three or four days after the operation, and am not in possession of the subsequent history of his case, but am informed that the wound had healed.

About a week since, and after this paper had been prepared for publication, I extracted, by the bi-lateral operation, a small mulberry calculus, from a little boy about seven years old. He is doing well.

Supposing the following case not devoid of interest, I transcribe it in the words of Mr. CRAIG, one of my pupils:

"J. U. W., aged 18, was wounded by an axe, Oct. 30th, 1844.—The blade, having first wounded the thigh, struck the scrotum, passed between the testicle, and penetrated the urethra. The family physician introduced a catheter which was suffered to remain twenty-eight days. Eight or ten days after the accident the scrotum sloughed and exposed the right testicle. He was brought to Dr. WILDMAN on the 26th November. At this time he discharged his urine through a fistulous opening in the scrotum, and the urethra was nearly closed by a cartilaginous stricture anterior to the fistula—it being impossible to pass the smallest bougie. Under these circumstances, it was resolved to cut down and lay open the stricture. The patient being secured in the position for lithotomy, and a large silver catheter passed down

to it, the scrotum was laid open from top to bottom, on the median line. Continuing the dissection between the testicles, that portion of the urethra covered by the scrotum was completely exposed. The urethra was now opened upon the end of the catheter; but finding it impossible to pass a director from before backward, the urethra was opened in its healthy portion behind the stricture, a small director passed from behind forward, and the stricture slit open. The catheter was now carried forward into the bladder and confined, the wound closed, by sutures and adhesive straps, and a suspensory bandage applied. The catheter was suffered to remain only four days. When it was first withdrawn, the urine gushed, during micturition, from the whole length of the incision. The quantity, however, gradually diminished, finally ceased altogether, and the patient was discharged cured in three weeks."

Remarks.—Wounds of the urethra should, if possible, be treated without a catheter. The urine has, if I may so express it, a strong *natural affinity* for the lining membrane of the urethra. This is evinced by the uniformity with which the urine returned *spontaneously* to its natural channel, after the operation of lithotomy. In fact, judging from the cases of urinary fistula which I have seen, *stricture* seems to be an essential precursor and concomitant of the disease; and the fistula invariably disappears spontaneously after the removal of the stricture. Thus it would seem that nothing short of mechanical obstruction, is capable of permanently forcing the urine from its natural channel. I object to the wearing of a catheter after wounds of the urethra: 1st, because, that, by putting the urethra upon the stretch, it causes the wound to gape; and 2ndly, because, by attracting the urine along its outer surface, it favors the escape of this fluid by the wound. A catheter is thought to prevent infiltration—I think it favors it. This accident is best guarded against by dilating freely the external wound.

ARTICLE IV.

A Case of Monstrosity. By S. B. CUNNINGHAM, M. D., of Jonesboro', Tennessee.

On the second day of July, 1843, Mrs. E****s, of this county, was taken in labour with her twelfth child—a country midwife was in attendance, and the labour advanced regularly and slowly until the head was born; when it ceased to make farther progress. After some effort, the attendant succeeded in bringing down the arms, but the body remained obstinately stationary. Eight or ten hours had been passed in fruitless efforts to effect delivery, when we first saw the case. The pains though enfeebled from exhaustion, were yet tolerably regular, and the delay under such circumstances and at such a stage of the labour, was unaccountable—gentle efforts having proved unavailing, the shoulders were grasped firmly with both hands, and by a pretty forcible zig zag traction, made during each pain, the foetus advanced until the abdomen passed, and the patient was quickly delivered of a still-born child. In due time the placenta came away, but it was fully three times the ordinary size.

This foetus presented a very remarkable case of *lusus naturæ*, and congenital deformity, combined—The abdomen was unusually large, and contained two large tumors, like foetal heads—The circumference of the body, measured at the umbilicus, was twenty-three inches. The ribs and sternum were pushed up to make room for the abdominal viscera—Each hand was supplied with a thumb and five well formed fingers, and each foot with six toes. The spinous process of the superior dorsal vertebra was wanting, and its place supplied by a spinal bi-fidal tumor, about the size of a small walnut. The internal surface of the tumor was covered with a sero-purulent fluid, the adjoining vertebræ were partially eroded—The occiput was perforated below the upper crucial ridge by a hole the size of a shilling, with rounded edges, and surrounded by the lacerated covering of a sac which was ruptured by the manipulations of the midwife—There was hare-lip, the cleft of which extended completely through the palate bones, reducing the cavities of the mouth and nose into a single one.

The appearance of the genital organs rendered the sex doubtful,

Superficially, the vulva appeared to be well formed, with deep commissure superiorly and invaginated clitoris, alias penis, about half an inch in length, soft and without any appearance of corpora cavernosæ, gland or prepuce. There was a meatus, through which a knitting needle was passed into a kind of *cul de sac*, with thick and solid walls about one inch in length and of the diameter of a large straw. The labia when separated shewed no other opening, nor was there any appearance of nymphæ. As the labia approached each other behind, the fissure rose more superficially until lost in rather loose integuments posteriorly, suggesting to the observer the idea of a scrotum, or an abortive effort of nature to make one. Internally there were some slight traces of spermatic chords, which were attached to vascular convolutions in the lower margin of the kidneys on both sides, which were easily unravelled, and more nearly resembled the plexus choroides of the ventricles of the brain, than any thing else to which I can compare them. Yet they were located in the *situ propria* of the fœtal testes, and one was much larger than the other.* The kidneys were two large rolling tumors of a rather spongy texture, infiltrated, of a pale color, and together weighing three pounds and three-quarters. The other viscera were natural—the lower extremities were unusually small—the foetus weighed between eight and nine pounds, the kidneys furnishing one-half of the entire weight. A most singular circumstance connected with this case, is the fact, that of twelve children born of the same woman, five had an abdominal and sexual organization similar to that just described, and were also still-born—the hydro-rachitic symptoms, however, were absent in these cases—The alternate children were well formed and healthy. During gestation of each monstrosity, the woman complained of unusual and anomalous symptoms, which enabled her in her last pregnancies to foretell their issue. The families of both the parents were as healthy as others, and there was nothing in the appearance of either, which could account for such a deformed progeny.

I leave to others the province of commenting on such cases—Though nothing practical may be derived from that just described, it furnishes an instance of a remarkable aberration of nature, which may interest the curious.

* Had this child lived, it doubtless would have been classed as an hermaphrodite, as the parents and neighbors were not able to determine the sex.

ARTICLE V.

Extirpation of the Mamma of a female in the Mesmeric Sleep, without any evidence of sensibility during the operation. By L. A. DUGAS, M. D., Professor of Physiology, &c. in the Medical College of Georgia.

On the 3rd of January, 1845, Mrs. CLARK (wife of Mr. JESSE CLARK, of Columbia Co., Georgia) came to this city, for the purpose of getting me to remove a schirrous tumor of her right mamma, which had been gradually increasing for the last three years, and which had now attained the size of a turkey's egg. The tumor had never caused any pain of consequence, was not adherent to the skin, nor did it implicate any of the axillary glands. Mrs. C. is about 47 years of age, has never borne a child, and her health, though by no means robust, was pretty good, and had not been impaired by the evolution of the tumor. The operation having been determined upon for the following day, Mrs. C. remarked to me that she had been advised by Mr. KENRICK to be mesmerized, but that as she knew nothing about it, she would like to have my advice, and would abide by it—to which I replied that there were several well authenticated cases on record, in which surgical operations had been performed, under mesmeric influence, without the consciousness of the patient; that I would be happy to test the subject in her case, and that I would endeavor to mesmerize her, instead of operating as had been proposed, on the day following.

On the 4th January, at 11 o'clock, A. M., I called on Mrs. C., and was informed that on the preceding evening she had been put to sleep by Mr. B. F. KENRICK (at whose house she resided.) I then mesmerized her myself, and induced sleep in about fifteen minutes. Finding my patient susceptible to the mesmeric influence, and reflecting that it would not be convenient for the same person to maintain this influence and to perform a surgical operation at the same time, I requested Mr. KENRICK to mesmerize Mrs. C. morning and evening, at stated hours, until insensibility could be induced. This was regularly done, with gradually increasing effect, when, on the evening of the 6th January, sleep was induced in five minutes, and the prick

of a pin was attended with no manifestation of pain. The sittings were continued, and the patient's sensibility daily tested by myself and others in various ways. On the 9th January, I invited Professor FORD to be present, and, after pricking, and pinching strongly the patient without evidence of pain, the mesmerizer was requested to leave the room, when we exposed the breast, handled it roughly in examining the tumor, and readjusted the dress, without the consciousness of the patient. We then held to her nostrils a vial of strong spts. of Hartshorn, which she breathed freely for a minute or two, without the least indication of sensation, unless the fact that she swallowed once be regarded as such, instead of a mere reflex action. On the 11th of January, in presence of Professors FORD and MEANS, in addition to the usual tests, I made, with my pocket-knife, an incision about two inches in length, and half an inch in depth into the patient's leg, without indication of sensation.

Fully satisfied now of our power to induce total insensibility, I determined to operate on her the next day at noon, but carefully concealed any such design from the patient and her friends, who did not expect its performance until several days later.

On the 12th January, at 20 minutes past 11, A. M., Mrs. C. was put to sleep in forty-five seconds, without touch or pass of any kind, the facility with which the mesmeric influence was produced having gradually increased at each sitting. At 12 o'clock, M., in presence of Professors FORD, MEANS, GARVIN and NEWTON, and Dr. HALSEE, the patient being in a profound sleep, I prepared her dress for the operation, and requested my professional brethren to note her pulse, respiration, complexion, countenance, &c. before, during and after the amputation, in order to detect any evidence of pain, or modification of the functions. As Mr. KENRICK had never witnessed a surgical operation, he feared he might lose his self-possession, and requested to be blindfolded; which was done. He now seated himself on the couch near the patient, and held her hands in his during the operation. This was accomplished by two elliptical incisions about eight inches in length, comprehending between them the nipple and a considerable portion of skin, after which the integuments were dissected up in the usual manner, and the entire mamma removed. It weighed sixteen ounces. The wound was then left open about three quarters of an hour, in order to secure the bleeding vessels, six of which were ligated. The ordinary dressing was applied, and all appearances of blood carefully removed, so that they might not be

seen by the patient when aroused. The amount of hemorrhage was rather more than is usual in such cases.

During the operation the patient gave no indication whatever of sensibility, nor was any of the functions observed by those present, modified in the least degree. She remained in the same sound and quiet sleep as before the use of the knife. Subsequently, the pectoral muscle, which had been laid bare, was twice or thrice seen to contract when touched with the sponge in removing the blood. About fifteen minutes after the operation, a tremulous action was perceived in her lower jaw, which was instantaneously arrested by the application of the mesmerizer's hand to the patient's head. This phenomenon recurred in about ten minutes after, and was again in the same manner quieted. Professor FORD, who counted the pulse and respiration, states that before any preparation was made for the operation, the pulse was 96, and the respiration 16 per minute;—that after moving the patient to arrange her dress for the operation, and just before this was commenced, the pulse was 98, and the respiration 17;—that immediately after the detachment of the breast the pulse was 96,—respiration not counted; and that after the final adjustment of the bandages and dress, which required the patient to be raised and moved about, the pulse was 98, and the respiration 16. All present concur in stating that neither the placid countenance of the patient, nor the peculiar natural blush of the cheeks, experienced any change whatever during the whole process—that she continued in the same profound and quiet sleep, in which she was before the operation, (with the exceptions above noted,) and that had they not been aware of what was being done, they would not have suspected it from any indications furnished by the patient's condition.

The patient having been permitted to sleep on about half an hour after the final arrangement of her dress, the mesmerizer made passes over the seat of the operation, in order to lessen its sensibility, and aroused her in the usual manner, when she engaged in cheerful conversation with Mr. KENRICK and myself, as though she had no suspicion of what had taken place. I then introduced to her the gentlemen, who had placed themselves so as not to be seen by her on awakening, and observed that I had invited them to come in during her sleep, in order that we might fully test her insensibility, preparatory to the operation. After a few minutes of conversation, I asked her when she would like to have the operation performed?—to which she replied, the sooner the better, as she was anxious to get home. I

added, "Do you really think that I could remove your entire breast, when asleep, without your knowledge?" Ans. "Why, Doctor, the fact is, that from the various experiments I am told you have made on me, I really do not know what to think of it." "Well, Madam, suppose I were to perform the operation one of these days, and to inform you of it when you would awake, would you believe me, and could you control your feelings, on finding that it had been done?" Ans. "I could not suppose that you would deceive me, and of course I would be very glad, but would try not to give way to my feelings." "Have you perceived, since your arrival here, or do you now perceive, any change in the ordinary sensations of the affected breast?" "No, sir, it feels about as it has done for some time back." About a quarter of an hour having elapsed since she awoke, I then told her that, as we found her in a proper state for the operation, I had performed it, and that the breast was now removed. She expressed her incredulity—said I was certainly jesting, as it was impossible that it could have been done without her knowing it at the time, or feeling anything of it now. She became convinced only on carrying her hand to the part and finding that the breast was no longer there. She remained apparently unmoved for a few moments, when her friends, approaching to congratulate her, her face became flushed, and she wept unaffectedly for some time. The wound healed by the first intention.

In laying the above narrative before the Profession, it is due to the cause of truth to state, that it has been submitted to all the Physicians present at the operation, and that I am authorized by them to say that it accords in every particular with their own observations so far as they were present. I should also add that, having no other object in view than the establishment of the fact that a surgical operation may be performed under such circumstances without the consciousness of the patient, I have designedly avoided any mention of the various and interesting mesmeric phenomena manifested prior and subsequently to the operation. These have been carefully and judiciously recorded by Mr. KENRICK, whose well directed zeal has enabled him to collect a body of highly important facts from a field unfortunately explored too exclusively by ignorance and charlatanism.

Augusta, Ga., 1st February, 1845.

PART II.—REVIEWS AND EXTRACTS.

Observations on the Cachexia Africana, or the habit and effects of Dirt-eating in the Negro race. By W. M. CARPENTER, M. D., Prof. Mat. Med. in the Louisiana Med. College. (New Orleans Medical Journal, No. 3.)

The nature and treatment of the diseases which seem to be peculiar to the African race, present questions of deep interest to the Southern physician. Among these diseases none is more worthy of the attention of the pathologist than that upon which Professor CARPENTER has written, nor has any subject equally interesting received less attention from the physicians of our section. No American physician, we believe, has noticed it. But in the West Indies, where the habit prevails to a great extent, it has excited considerable interest, and a number of articles have been written upon the subject. We are much pleased that Prof. CARPENTER has laid before the profession the valuable results of his observations of this singular malady, and we very much regret that our limits prevent us from extracting the entire article.

In the Southern States, dirt-eating is of frequent occurrence, particularly on large plantations which occupy unhealthy localities. It is not so common however in this region as it appears to be in some of the South-Western States. We are informed by Dr. C. that in Louisiana, large planting establishments have been entirely broken up by the extensive mortality among the slaves, resulting from this pernicious habit.

Symptoms.—The initial and essential feature of this disease, is a depraved appetite, causing an invincible craving for earthy substances, and so strong is this desire, that it generally triumphs over every effort to prevent the practice; and such is the indomitable force of the habit, that neither bolts, nor bars, nor punishment, nor the certainty that it will inevitably end in death, can in any measure prevent their indulging in it—‘The only appreciable signs of mental activity,’ says Dr. Craigin, ‘exhibited during the course of this disease, are the crafty and cunning plans which the patient most subtly matures, and as stealthily executes, to procure his desired repast.’ They usually fix upon one article, as preferable to the rest, but in its absence will readily indulge in those at hand. The articles most frequently eaten

are clay, mud, dried mortar, plaster, lime, dust, ashes, chalk, tobacco pipes, slate, bricks, sand, rotten wood, rags, hair and some other unnatural substances. Mr. Hunter states that, in Jamaica 'they are fondest of a kind of white clay, like tobacco-pipe clay, with which they fill their mouths, and allow it to dissolve gradually, and express as much satisfaction from it as the greatest lover of tobacco could do.' In Surinam, Dr. Craigin found they generally preferred to eat the fossil shells, of which a bed lay near the surface; and the streets of the towns were made and repaired with the same material.

"As the symptoms, resulting from or accompanying dirt-eating, are trivial in the beginning, and very slowly progressive; and as they only come under the observation of the physician, in the latter stages, and after a considerable lapse of time, when they have assumed a serious aspect, it becomes difficult to determine what is the order in which they appear. On enquiry, however, it will generally be ascertained, that the first symptoms that attracted the notice of the patient, are those indicative of more or less serious derangement of the digestive functions. The bowels are irregular in their action; in some cases habitually constipated, in others the constipation alternates with spells of diarrhoea. Heart-burn and flatulency are common symptoms at this stage; and many patients complain of loss of appetite, or of vomiting after their meals. In some cases there is slight fever occasionally, or sensations of burning in the palms of the hands and feet. The patient, at this early stage, frequently begins to exhibit an inclination to avoid effort of any kind, skulks from work, and sometimes pleads indisposition; but as he conceals the true nature of the case, looks as well as usual, and can only designate a slight derangement of the bowels, or some other disorder, of an apparently unimportant nature, his plea is generally heard with suspicion, or rejected.

This state of things continues for some time; the disease pursues its insidious course; the patient retains a degree of embonpoint which might easily delude the observer, in regard to the gravity of the case. A closer examination, however, will reveal the extensive lesions that exist in the structure or functions of the vital organs.

"The whole body has a full, and rather œdematous appearance; and the skin is dry, sometimes smooth, but more frequently scurfy or furfuraceous, and it generally has a turgid or shining look. The face has a peculiar tumid but flabby fulness; and those portions of the body which usually abound in fat, retain their full appearance, though they are wanting in their ordinary elastic resistance. The muscular parts of the arms and legs still have their roundness, but feel soft and flabby. The feet, ankles, and hands are almost always œdematous, pit under pressure of the finger, and retain the impression after the removal of the force. Dr. Craigin observed, in some cases, and in some parts of the body, a peculiar state which he compared to the condition of the tissues in elephantiasis, in consequence of the elasticity of the integuments and of the sub-cutaneous tissues. There is, however, one trait in elephantiasis that I have not seen in this disease;

and that is, the hypertrophy of the skin itself; for though the sub-cutaneous tissues are often hypertrophied without œdema, yet the skin in a great measure retains its thinness. The eye is prominent, being rendered so by the abundance of the adipose tissue of the orbit, and the lids are often puffy or œdematous. The eye has generally a languid, unmeaning look, devoid of vivacity. The conjunctiva has generally a snowy white or dirty yellow and jaundiced appearance. Dr. Craigin says, that in all the cases he saw in Surinam, it was 'of a peculiar snowy whiteness, untinged by a particle of red blood.' This condition however is by no means universal here, and the jaundiced appearance exists in a large number of the cases. The palms of the hands, and soles of the feet, are strikingly white and pale; the lips, gums, and the whole mucous membrane of the mouth, are remarkably pale and anæmic, and the 'tongue which in health performs its duty with so much alacrity, lies bleached and bloodless, scarcely able to represent the motives of its owner.'

"These symptoms are referable to an anæmic condition, or rather to a condition characterized by a great deficiency of the red globules of the blood. In several cases, blood was drawn, and it always presented the same characters, but varying in degree. In general it has a thin but turbid appearance; the globules having a peculiar purplish colour, somewhat like that of pale claret lees; and floating perceptibly apart, separate, or in little groups, in the large mass of serum. The proportion of clot to the mass of blood is remarkably small, though the organic solid matters of the serum, are, in quantity, as great, or even above, the ordinary standard. I regret, not to be able to give exact numerical data respecting the quantities of the elements of the blood in these cases, as I only analyzed the blood in one case, and my notes on this analysis have been mislaid. In this case the solid matter of the clot was less in weight than that obtained by Andral and Gavarret from the blood of chlorotics; the solid organic matters of the serum, to the contrary, were abundant, and the serum coagulated at a temperature of 153° of Fht.

"The patient is excessively dull; sometimes stupid almost to idiocy; is very susceptible to the influence of cold, and 'delights to bask in the sun's rays,' or to hang over a fire, even in the hottest days of summer.

"As the disease progresses, function after function becomes deranged, and soon the physiological balance is completely destroyed. Cutaneous transpiration is almost completely suspended, the urine is sometimes diminished, but in other cases greatly augmented in quantity, and there is often an irritable state of the bladder, which is exceedingly troublesome, in consequence of its giving rise to repeated calls to urinate, which are so urgent and painful in some cases, that the patient has not time to walk a few steps, or even to get out of bed, before the urine is discharge. In two or three cases, that have come under my observation, this condition existed to such a degree as to amount to absolute incontinence, but apparently, without any

paralysis about the neck of the bladder, and depending solely on the intolerance of the bladder to the presence of urine. Some of these patients have assured me, that they were obliged to micturate twenty and thirty times in the course of the night; others that they had calls of the same kind every few minutes, and being worn down by the disturbance, they no longer got up, but had made provisions which prevented the necessity of rising. In women there is generally suppression of the catamenia, which, in some cases, however, are generally re-established whenever there is for a short time an improvement of the general condition.

"Instead of the constipation, which is the most common condition of the bowels in the earlier periods of the disease, we have in this advanced stage, almost incessant diarrhoea. The stools are of variable consistence, and pale or yellowish, sometimes mixed with mucus or pus, or streaked with blood. The abdomen is not generally tender when pressed, but is generally flaccid or tympanitic; and the mesenteric glands can rarely be felt.

"The disinclination to exercise now amounts to actual lethargy; and the slightest exertion, such as walking a short distance, or even rising up, produces an overpowering sense of fatigue and lassitude, attended by an oppression of respiration, painful palpitations of the heart, which are often audible to the bystander; the carotid and temporal arteries beat strongly, and a distressing throbbing is felt in the head.

"The patient is completely overcome by any attempt to walk up an acclivity, and when obliged to perform any labour that requires active exertion, or to walk briskly, particularly when it is hot, will sometimes sink suddenly to the ground overpowered and exhausted, and sometimes in a state of suffocation or of syncope.

"When the patient is quiet, these painful feelings are relieved or diminished though the dyspnoea still continues to some extent, the heart's action remains laborious, and in some cases the painful throbbing in the head, disturbs and almost prevents sleep at night. I have seen cases in which this symptom causes more distress and complaint than in all others; and some, if not all, thus affected died suddenly, at night, I suspect, from effusion upon the serous surfaces or in the ventricles of the brain.

"Notwithstanding, however, that the visible signs of disorder, are diminished by rest; careful auscultation easily detects the important functional or structural lesions which, according to my observation, invariably attend upon the advanced stages of this disease. The pulse is, in general, rather small, but tense, and varies in frequency from 80 to 120 a minute. In two or three cases, I observed pulsations of the jugular veins which were synchronous with the pulse, and, in these cases, thought that the signs afforded by auscultation, indicated hypertrophy of the ventricles and dilatation of the auricles: in one case, my diagnosis was confirmed by post-mortem examination; one

of the others is still living, and I hope to know the condition in case of her death, which can scarcely fail to take place soon.

"The derangements of the heart's action seem, in the early stages of the disease, to be sympathetic, or perhaps dependant on an irritable condition of that organ; but as the disease progresses, changes soon take place in the structure of that organ, and in the latter stages auscultation almost invariably indicates the existence of structural lesions of the heart or its appendages. In no one instance, have the post-mortem examinations failed to confirm the indications, afforded by auscultation, of the existence of these lesions.

"The examination of the respiration generally affords no very decided results. The dyspnœa which in some cases amounts almost to an asthmatic state, is generally aggravated by a horizontal position, especially when laying on the back, and is sometimes so urgent as to require that the patient should be propped up in bed continually. This dyspnœa however seems to depend upon the cardiac lesion, and no corresponding sign can generally be detected in the function of the lungs. The respiratory murmur is sometimes wanting over small portions of the chest; the mucous râle is frequently heard, but there seems to be nothing constant or definite in the condition of the lungs.

"With the heart it is different. Its impulse is generally very strong, and can be distinctly perceived in some cases, over the entire chest; and though its sounds and impulse are increased by exercise, they retain, when the patient has been long at rest, a degree of energy much greater than in the normal state. The *bruit de soufflet* is a common symptom, and indeed may be said to be rarely absent.

"In hot weather, the symptoms are generally aggravated; the bowels are more deranged, the heart more irritable, and the disturbance of the circulation greater, the dyspnœa more urgent, the extremities become œdematous, and menstruation in the woman ceases. It is consequently in summer, that the disease, when left to pursue its course, naturally tends to a fatal termination. This however is not the case, in, perhaps, a majority of the cases; for as far as my observation extends, the greater number go off in winter; not from the immediate effects of the disease, but from attacks of acute diseases, particularly acute pleurisy and pericarditis.

"Cool weather is highly favorable in its effects on the general course of this disease, and I have seen several cases in which there appeared to be a complete restoration of the health in winter; the patient would seem well, be able to perform active work, and in women the catamenia become restored. I have known several women thus affected, who became pregnant, and bore children during the existence of this improved condition. It is probable that, in cases in which the habit had not been continued so long as to produce important lesions of the heart, and other organs, the amelioration of the symptoms, resulting from favourable weather, might become permanent, if the habit could be broken. The respite, however, generally terminates soon after hot weather sets in, the next summer; the

symptoms soon assume a more formidable character than before the respite, and a brief period brings the fatal end."

The diagnosis is oftentimes very difficult, as the cardiac derangements, and chlorotic symptoms which result from dirt-eating, may depend upon other causes. In these cases we have no aid in the investigation from the patients, for in almost every instance they will most pertinaciously deny the existence of any such habit, and they often evince a degree of cunning in their attempts to evade detection, in remarkable contrast with the stupidity which usually characterises the subjects of this unnatural appetite. Dr. CRAIGIN, and Dr. CARPENTER also, regards as pathognomic, the white and pallid appearance of the palms of the hand, and soles of the feet, but more especially the bloodless and blanched appearance of the inside of the lips, gums, tongue and lining membrane of the mouth.

"The tongue and gums often have the peculiar translucent and pallid hue of white wax. These appearances have never been absent in any case of confirmed and habitual dirt-eating, that has come under my observation; and from these symptoms, if existing in the marked degree which is common in this disease, and accompanied by the general aspect of these patients, I feel safe in pronouncing unhesitatingly upon the existence of this habit. In numerous instances the patient, as well as the master, will positively deny the existence of any such habit, but if those signs are present it is a strong indication, and in such cases I have always been able, in a short time, to establish the fact to my own satisfaction, and generally to that of all parties.

"As there are cases of chlorosis in which the apparent conditions of this disease are represented, it sometimes becomes difficult to distinguish between them. Indeed, the condition arising from dirt-eating, constitutes a peculiar variety of chlorosis, produced by a special cause, and characterized by highly aggravated symptoms. The extraordinary whiteness of the tissues of the mouth, may serve in some measure to direct us, for though the general complexion, in chlorosis, is sallow, I have never seen a case of it in which the mucous lining of the mouth had the bleached aspect observable in the least marked of these cases."

The prognosis is generally unfavorable—Without the habit is broken up at an early period, which can rarely be effected, the treatment will consist in but little more than a palliation of some of the more distressing symptoms. In the West Indies it is looked upon as equally fatal with phthisis.

"Notwithstanding the possibility of curing this affection, when

treated under favourable circumstances, it must be admitted, that cases of cure are remarkably rare ; owing to the inveterate obstinacy with which the habit is persevered in. But few cases have come under my observation, in which the habit could be considered as eradicated, and the patient permanently cured. Mr. John Hunter, states that, in Jamaica, 'a negro labouring under this malady, is considered as lost. On many estates, half the number of deaths, on a moderate computation, is owing to this cause.' All other writers confirm his statements respecting the difficulties encountered in treating this affection in the West Indies, and it is to be regretted, that in this country, the results of various expedients, and modes of treatment, have afforded but little better results."

"The length of time required by this affection to run through its course to a fatal termination, depends upon so many circumstances, that no general rule can be applicable to all cases. I have seen negroes, who had been in the habit of eating dirt, occasionally, for four or five years, and who had only indulged so far as to induce the dyspeptic state which constitutes the premonitory stage of more aggravated cases. One case of this kind terminated in general anasarca of which the patient died ; others are still living. This, however, is by no means the usual course of the affection, for it is rare that these patients exercise the slightest control over their inclinations ; the habit becomes a passion with them, and the derangements resulting from it generally end fatally in a few years. M. Hunter says, that in Jamaica, when carried to excess, perhaps with a view of committing suicide, it is sometimes very quickly fatal, and 'there are instances of their killing themselves in ten days.'"

Considerable difference of opinion prevails as to the causes which produce this affection—Unwholesome food, prolonged abstinence, and irregularity in eating, have been mentioned as causes, but every one conversant with the disease must be satisfied that such opinions are erroneous, for in many instances it prevails among those who have an abundant supply of wholesome food, and at regular hours. JOHN HUNTER considered the affection as being in its origin "more a mental than a corporeal affection." However true this may be of some rare cases, it cannot be so generally, for the disease is of frequent occurrence even among young children. The influence of example often causes an extension of the habit when once it has been established on a plantation. We are fully convinced that most cases depend upon a depraved state of the digestive organs, brought on by long exposure to a malarious atmosphere, for cases in adult negroes are rare in healthy localities. Prof. CARPENTER considers an unwholesome atmosphere as a predisposing cause.

"Flat swampy and insalubrious regions seem to predispose to this disease; for though we meet with occasional isolated cases on plantations of the higher and rolling lands of this State, the disease, in these districts, is rarely seen affecting a large number of negroes on the same plantation, as is sometimes the case in low and unhealthy sections of the country. There are many plantations situated on the banks of the rivers and bayous of this State, on which so many cases have occurred, as sometimes to create alarm, and, in one or two instances, to cause the desertion of the places. Instances of its extensive prevalence on plantations are common on Bayou Lafourche, though they are said to have been much more so, some years ago. On the Bayou Boeuf, particularly in the parish of Rapides, it seems now to be causing great mortality, and on the banks of the Mississippi River, and the Tèche, instances have likewise come to my knowledge."

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"*Pathology.*—In describing the appearances, I would be understood, not as desiring to establish upon these few observations, any general conclusions respecting its pathology; but only as indicating the lesions which, in these particular cases, appeared to me to arise from, or to have some relation to, the disease under consideration.

"The first thing that attracts notice in making post-mortem examinations of these cases, is a peculiarly pale and anæmatus appearance of the muscular tissues. The adipose tissues, so far from being much reduced in quantity below the usual standard, are generally abundant, filling up the spaces usually occupied by it, between the muscles and other organs, and giving to the body and limbs a rounded and plump appearance.

"The contents of the abdomen present the same pale appearance as the muscles, but even in a more remarkable degree; the stomach being white and flaccid, the lining membrane appearing soft, but possessing in fact its ordinary consistency, and is poorly supplied with blood vessels, excepting sometimes, a few small distant patches, which are vascular and reddened, and sometimes slightly ecchymosed. The intestinal canal partakes throughout, of a similar general aspect; is pale and thin, and sometimes presents a remarkably diaphanous or almost transparent appearance. This character appears more striking in the small intestines, though it is sometimes equally so in the colon. Scattered at considerable distances apart, along the intestines, the reddish patches are discernable and in one or two cases I have detected ulcerated patches, which were more common in, though not confined to, the large intestines. These ulcerated patches by no means correspond to the glands of Peyer and Brunner, but appeared to be merely spaces from which the epithelium was removed. The glands above mentioned, exhibited signs of irritation and engorgement in several cases, and it is probable that they may be ulcerated in some. The mesenteric glands were enlarged in some cases, and in one case, several of them contained tuberculous deposits; in this case however, tubercles also existed in the lungs. The liver

and spleen were each enlarged in some cases, but in others appeared nearly natural; and the gall bladder varies as usual in chronic cases, in its dimensions, the quantity and colour of its contents, but presented nothing special or worthy of remark. The kidneys, which I expected, from the symptoms of some of the cases, to find altered, were apparently of a normal size and consistence. The bladder, I have several times, found to exhibit traces of inflammation, about the neck, and extending along the urethra. The womb, in the case of a woman who had only been delivered about a month before, was about three and a half inches long, and remarkably white and granular in its structure, and very friable (1.)

"The earthy matters cannot invariably or perhaps generally be detected in the alimentary canal, which may be accounted for, by the circumstance that in many cases, severe diarrhoeas precede their fatal termination, and remove all of these matters which are not impacted in the intestinal pouches, or concretions which cannot readily pass through the narrow portions. In those cases however which terminate suddenly, in consequence of acute attacks or other accidents, without having been subject to severe diarrhoeas, the earthy matters are generally detected with ease. In some cases it is found in grains or fragments dispersed through the fecal matters, but in others they are more or less agglomerated by mucus in different portions of the canal; and in one case I found the earthy matter (aluminous clay), occupying three or four of the sinuses of the colon, in the form of hard concretions, which fitted the shape of the pouches so nicely as not to be easily removed. The surfaces of these concretions, which presented towards the canal, were smooth and covered by an envelope of tenacious mucus, probably left by the faeces when traversing it, and this mucus seemed to be continuous into the substance of the concretions, which indeed appeared to have increased in size by particles of earth lodging in, and being cemented to the masses by mucus. The abdominal serous tissues do not seem to be generally the seat of any remarkable changes, though that cavity frequently contains more than the ordinary quantity of serum.

"The contents of the thorax exhibit the most important pathological changes. The lungs themselves are not generally diseased, and we only find in them lesions, arising from influences in a great measure independent of this disease, and such as are frequently found accidentally co-existing with other diseases, such as engorgements, hepatization, tubercles, &c. The pleura, however, very frequently shows marks of old or recent inflammation, and its cavity contains an unusually large, sometimes immense quantity of fluid, of a disagreeable odour, and with or without flocculi. The heart or its appendages, I have never failed to find diseased. One or both ventricles are gen-

(1.) In this case the child was born at full term, it nursed well and was, besides, fed with appropriate articles of food, but notwithstanding its gradual growth, it weighed at the age of four weeks, only three pounds.—It died a few days after the mother.

erally found hypertrophied, sometimes enormously so; and the auricles are sometimes dilated. There seems to be no constancy in the relations between the hypertrophied condition of the ventricles, and the dilatation of the auricles. The muscular tissue of the ventricles is always paler than natural, and even when hypertrophied has a flabby look and feel, and there is an evident want of that firmness of structure which naturally characterizes this muscle. Another singular condition, which existed in a remarkable degree in two cases examined by me, in a somewhat less degree in one other case, and which may in fact be observed to some extent in most of these cases, was the accumulation of fat about the heart, and in the tissues of the thoracic septum. In several cases, the fat has been abundant about the base of the heart, occupying the tissues about the auricles and base of the ventricles, though not appearing, in any extent, to penetrate the muscular tissues, but lying over the surface or occupying depressions, and forming large bunches, which are sometimes connected round in such a manner as to constitute a prominent collar-like mass, surrounding the base of the heart, and partly enveloping the auricles. As this condition coexisted in each of the cases in which the developements of the fatty masses was greatest, with dilatation of one or other of the auricles it might be supposed to have caused this dilatation, by obstructing the free passage of the blood from the auricles to the ventricles; this however can only be established by a greater number of observations. It would perhaps be supposed too, that this lesion should occasion some marked modifications in the cardiac sounds, but though careful auscultation was practised in each case, I was not led in either of them, to suspect any thing more than a degree of hypertrophy of the ventricles with more or less dilatation of the auricles. Of the eight well marked cases that I have examined after death, three exhibited hypertrophy of both ventricles; two hypertrophy of both ventricles, dilatation of the right auricle, with a considerable hypertrophy of the adipose tissues at the base of the heart; one, hypertrophy of the right, and slight hypertrophy of the left ventricle, dilatation of the right auricle, hypertrophy of the fat at the base.

I have had no opportunity of making examination of cases dying during the earlier periods of the disease, but would infer, from the indications obtained by auscultation, that the lesions of the heart are primarily, only functional, and that the structural changes arise at a later period. For in the earlier stages, though the heart's action is tumultuous, after exertion, it soon becomes composed by rest; whereas at a later period the heart labours incessantly, but is still augmented by motion."

As we have already remarked, the disease is most generally fatal. All treatment must be unavailing unless the habit of dirt-eating is broken up, and this cannot often be effected. Some persons resort to severe punishments in order to deter the patient

from his unnatural indulgencies. We entirely agree with Prof. C. in condemning this course as cruel, because it is almost uniformly inefficacious. Others confine the patient in tight rooms; but as this course deprives him of proper exercise, and pure air, it is of course injudicious. The plan employed in the West Indies, and recommended by Dr. CARPENTER, is to cause the patient to wear a close wire mask, secured by a lock, which prevents him from eating improper articles, and allows him at the same time to take free exercise.

"One of the most important measures, not only in reclaiming the subject from the habit, but in relieving them of the cachectic state, is the establishment of an appropriate system of diet.

"The nature of the diet should of course correspond to the stage of the disease in which each individual is seen. When the case is only so far advanced as to prevent the chlorotic condition, with a degree of functional disturbance of the heart's action, we may expect the most decided advantage from the use of fresh and easily digested animal food, well seasoned with capsicum; and we may sometimes permit the occasional use of other stimulants, as a little wine, or even brandy, in fact a generous diet. When, however, we find the patient laboring under the symptoms of organic lesions of the heart, or under diarrhoea or other symptoms of irritation or ulceration of the bowels, it will of course require a corresponding modification of the diet; and we may in these cases obtain good results from the employment of bland, very easily digested, but at the same time very nutritious substances, such as animal jellies, or amylaceous preparations seasoned with cinnamon, or other appropriate spice. A fish diet has been insisted on most strenuously by some who have studied this affection and seen the various methods of treatment, in practice; and it is easy to imagine, that when the bowels are in a condition to tolerate such food, it might answer a good purpose; indeed, I have seen cases that have improved rapidly on this diet, though, as they were sent to the sea-shore, it would perhaps be nearer the truth to attribute the amelioration to change of air.

"Next in importance to a proper diet, in these cases, certainly stands a change of air, to a higher region or at least to a healthy one; and if a change to the sea-shore is practicable, it is to be preferred. In cases in which this has been practised, they have almost invariably improved, and the improvement, in some cases, seems to have been permanent.

"Upon these means of improving the general health, our principal chance of cure depends; and in some favorable cases nothing more is required. Edwards, in his history of the West-Indies, says, 'the best and only remedy is kind usage and wholesome animal food; and perhaps a steel drink may be of some service.'

"In regard to the medical treatment, we must be directed by general principles, in the application of remedies directed against the

conditions which give rise to the groups of symptoms. Thus, with a view of removing the chlorosed state, tonics will be proper, particularly the preparations of iron; and the aromatic stimulants, especially cinnamon, canella alba, or winter's bark. The bitter tonics may be beneficial in some cases; among these, the best will probably be quassia, simarouba, cusparia or gentian. If cathartics should be required, rhubarb seems to fulfil the indications in this particular case, and has been most generally recommended.

"The acute inflammations which frequently attack the pericardium and pleura, generally yield promptly to local depletion, and the distress arising from the tumultuous action of the heart is generally much diminished by the same means; indeed, notwithstanding the thin state of the blood, I have never seen small local depletions act more favorably than in these inflammations; blisters may perhaps be applied in some cases with advantage, but it has appeared to me, in the one or two cases in which I used them, that they rather increased the effusions into those serous cavities, particularly into the pericardium. Hydrocyanic acid, and digitalis, by allaying the inordinate action of the heart, greatly promote the comfort, and perhaps improve the general condition of the patient.

"Both Dazille and Mason, laud the operation of emetics in this affection, and recommend that they should be followed up with brisk purgatives. Mr. Mason recommends, as a tonic laxative, an infusion of quassin, rhubarb, and ginger, and it is unquestionably well adapted to many cases requiring the action of purgatives. I cannot, however, see what advantage is to be gained by the use of emetics in any case, and should regard them as decidedly dangerous in many instances."

We cannot conclude this article without an expression of our gratification, that the public attention has been called to this curious malady, and we trust that others will follow the example and lay before the profession their observations of the modifications of morbid action which result from the peculiar physical constitution of the negro race.

Extraction of Foreign Bodies from the Œsophagus. From Mr. Liston's recent Lectures on the Operations of Surgery.

How are foreign bodies in the gullet to be got out? It will depend very much on their sort and size and situation. You will not set about taking out needles or pins in the same way that you would large lumps of gristly meat, bone, coins, or any other hard body that may have lodged in the passage.

Foreign bodies in the œsophagus and pharynx cause a great deal

of pain when the part is put in motion. If it be a hard and sharp body, there is a pricking sensation; if the body be of large size, the passage may be obstructed, the breathing may even be affected, as I have said; at all events, the patient will be unable to swallow anything. A very small solid substance will obstruct the passage completely when the patient is naturally very nervous, or the part is at all diseased. Patients who have a difficulty of swallowing become nervous: hysterical women are choked with very small substances, and patients who are laboring under stricture or organic disease of the œsophagus may have the passage closed from the lodgment of a very small portion of food. I have repeatedly seen cases of this kind. I recollect a woman, who came to me three or four times within two years, complaining that the passage to the stomach was completely closed. By introducing a small probang, the obstruction was discovered in the usual place; a piece of meat was pushed through the contracted portion of the canal, and she was relieved. She would not suffer the introduction of instruments for any other purpose.

Suppose that a large piece of gristly meat, or a large piece of tripe—oh! indeed, you need not smile at this, for you will find in surgical books many accounts of persons who have been choked with tripe—gets entangled in the narrow part of the canal, immediately behind the cricoid cartilage, you must consider how you are to remove it. By introducing a probang you may, it is true, push it down to the stomach. A piece of whalebone, with a sponge at the end of it, will do very well. In introducing an instrument for any purpose into the pharynx or œsophagus, you must look to the position of the head, and bring all the tube, fauces, pharynx and œsophagus, as far as possible into a line with the mouth. For this purpose you throw the head very well back, depress the tongue with the finger of the right hand, and push the instrument back to the forepart of the vertebræ, where you guide and bend it suitably with the finger. Just as you get it behind the velum, and into the top of the pharynx, you desire the patient to swallow his saliva. By this action the instrument is drawn back into the throat, the rima glottidis is closed, and you then, with the greatest security, push the instrument downwards, certain that it will go in the right passage. You continue to push it onwards till you meet with some obstruction. But there are foreign bodies which it would be very unsafe to push down, such as a piece of rough bone or cartilage, or hard gristly meat. You might tear the passage, or cause a rupture of it, and this would be attended with very serious consequences. Infiltration in the loose cellular membrane, putrid abscess, and death, have not unfrequently followed rash operations of this kind. If the foreign body is of such a nature that you cannot push it down safely, you must bring it up if you can. For this purpose you must be provided with instruments of various forms. Here is a pair of forceps well suited for removing hard meat. You feel that there is something obstructing the canal; you open the instrument on the foreign body, seize, and extract it. I have taken out many

lumps of meat in that way. If the foreign body is hard—a piece of bone or a piece of metal—you seize it with such forceps as these. The blades are made to open in different ways, according to the position in which the body lies. If a piece of metal—generally a coin—is fixed in the Œsophagus, you may ascertain its position correctly, though you may well guess whereabouts it is to be found, by passing down a *steel* probe. This is the way to deal with large foreign bodies; but you very often find small sharp bodies lodged in the pharynx—sticking deeply in the tissues composing it—pins, pieces of fish-bone, and portions of the beards of barley. I have seen a great deal of irritation produced by a small husk of oatmeal stuck in the fauces or pharynx. These things will sometimes stick in the membrane for a long time; but you must recollect also that these patients will often complain of a foreign body lodging in some portion of the passages long after it has got into the alimentary canal. The feeling of pain and uneasiness often remains a considerable time after the foreign body has gone away. The same takes place in the eye. A small fly gets betwixt the lid, for instance—no uncommon occurrence in riding or walking out into the country in summer—it causes intense pain; you get a friend to raise the eyelid and pick the fly out, but the feeling still continues, and does not go off, perhaps for many hours. You must be quite sure that the foreign body is really lodged in the throat before you attempt to take it out. You bring the patient opposite a strong light, hold the tongue down, and then, perhaps, you see the substance: and by taking hold of it with small forceps, pull it out. Or, if it be low down, you hold the patient's head back, and with your finger feel down by the epiglottis, by the root of the tongue on each side, and if your nail is a little long, you may entangle and bring up the foreign body between the finger and the nail. I have even taken pins and needles out in this way. But you may not be able to reach the foreign body in this manner, and you must then use the forceps. You will find a difficulty in disentangling needles; you are obliged to humor them, moving them first in one way and then in another, and at last you will succeed in extracting them. Pieces of wire, nails, &c., are sometimes lodged here, and great caution is required on the part of the surgeon in handling them.

I should have stated that coins are sometimes extracted by means of forceps, and sometimes they are removed by a blunt bent hook.

Occasionally you find very curious foreign bodies lodged in the throat. The following case came under my notice years ago, though the patient was not under my care. A boy, engaged in herding cattle, was preparing his fishing tackle. He had a hook for catching jack, which he put in his mouth in order to repair it in some way. The cattle, meanwhile, wandering amongst the corn; he shouted out on observing them, and in recovering his breath, filling his lungs again, the hook slipped back into the gullet, and there it stuck. You are aware that in fishing for jack, there are used three large hooks, tied back to back, like a grappling iron, by means of brass wire.

There was much fuss made about this case; the boy was brought from a great distance to the Hospital, and he was kept as a show for some time. Every one suggested some plan or other for getting out the foreign body. It was a case in which, had it been in the hands of a very energetic surgeon, oesophagotomy ought to have been at once performed. There appeared but little chance of the three hooks coming out again, and the only apparent way of getting the boy out of the scrape would have been to make an opening below, and extricate them by pulling them downwards. The lad had a long chain hanging out of his mouth for weeks together, and at last it was proposed to use a bone probang, a large ivory ball with a hole in it; and this was to be pushed down to disentangle the barbs. By this time, however, extensive ulceration of the pharynx had taken place, and the foreign body was gulped up, to the relief both of the patient and of the medical men. In cases of this kind, you frequently find that practitioners are as much indebted to chance as to good management. Sometimes foreign bodies can neither be got down nor drawn out, and in these cases, as in the one I have just related, the oesophagus ought to be cut into. The incision should be made, not in the median line, but by the side of the windpipe. An incision ought to be made in the superior triangular space of the neck, of sufficient length to enable you to get cleverly to the obstruction. The larynx must be turned aside, and you will take care not to come in contact with the recurrent nerve, or to interfere with any of the other important organs in the neighborhood. Guided by the foreign body, you cut through the parietes of the oesophagus, lay hold of it, and extract it with forceps, vulsellum, or hook, as may be. I think that Mr. Arnott had occasion to perform this operation in the Middlesex Hospital some years ago, but it is not had recourse to once in a quarter of a century.

Where there is simple contraction of the gullet, you endeavor to restore the passage to its natural size. For that purpose you introduce instruments, day after day, till the parts recover themselves, and you can pass an instrument of full size without difficulty. You must be sure that there is really contraction, and from thickening of the walls of the tube, that it is not merely an hysterical affection; and you endeavor to ascertain if there is organic disease, that it is not of a malignant character, before you propose a proceeding of this kind. You would not think of destroying the stricture by caustic, as proposed by Sir Everard Home; it is only by very gentle management that you can expect to succeed, or to benefit your patient.

You require to introduce an instrument where persons have received injuries of the neck, but you would not put in a tube and retain it there. In bad cases, where the pharynx or oesophagus has been wounded, this may be done; but in the majority of cases all you have to do is, from time to time, perhaps two or three times a day, to introduce a common elastic catheter, such as is employed for the urethra. You pass it beyond the wound, and through it inject broths and jellies. Of all this I have already fully informed you.—*London Lancet.*

Contributions to Therapeutics. By J. MOORE NELIGAN, M. D.,
Physician to Jervis-street Hospital, Lecturer on Materia Medica
and Therapeutics in the Dublin School of Medicine, &c.

On the employment of Conium in painful diseases.—In the following communication it is my intention to offer a few practical observations on the anodyne and sedative powers of the common hemlock, and to illustrate its medicinal properties by relating a few cases in which its employment has been attended with much benefit. Although much employed and highly extolled by the ancients, hemlock had fallen into complete disuse in modern medicine, until the latter end of last century, when it was again introduced, and very generally used, owing to the high terms in which it was spoken of by Baron Störck, who, in 1762, published an account of the physiological and therapeutical properties of this drug. Störck ascribed two distinct therapeutical properties to the preparations of hemlock; first, that of a powerful anodyne and sedative, and second, that of a deobstruent and alterative, especially in the treatment of glandular or visceral enlargements, of scrofulous affections, or of secondary syphilis, and of chronic cutaneous diseases. In the present day but little faith is placed in the deobstruent virtues of the drug, and much difference of opinion exists even as to its anodyne properties, consequently it has again lost much of its reputation as a medicine, and is not nearly so much employed as it deserves to be.

Since the discovery of the active principle of the plant, this almost universal discredit of its medicinal powers has been very satisfactorily accounted for, as it has been distinctly proved, that the application of even a moderate degree of heat, when continued for any time, causes it to undergo decomposition, and therefore that the extract (the preparation most generally employed) when prepared in accordance with the directions of the Dublin and London Pharmacopœias, is, for the most part, inert, or nearly so; that this is the case I have repeatedly satisfied myself, by applying the potash test to various samples of the extract of our Pharmacopœia, obtained at the best shops. This potash test is of so simple a character, so easy in its application, and so certain in its results, that we should never omit its employment before commencing the use of any of the preparations of hemlock. It consists merely in triturating in a mortar the preparation we wish to test with a small quantity of strong caustic potash, when the peculiar odour of the active principle, *conia*, is in a few moments emitted; care, however, must be taken not to confound this odour with that of the plant itself, from which it differs most remarkably, the latter bearing a singular resemblance to the smell of mice, while that of *conia* is a peculiar, penetrating, very disagreeable, somewhat alkaline odour, an acquaintance with which may be easily acquired by applying the test to the fresh green leaves, or to the recently gathered ripe fruit.

In commencing, then, any new investigation into the medicinal action and uses of hemlock, it becomes of much importance to take especial care that the preparations of the drug which we administer should have their energy unimpaired, and the peculiar properties which exist in the recent plant as little changed as possible. The preparation which I employed in the following cases, and which I have been in the habit of prescribing for the last two years, under the name of *Succus Conii*, is simply prepared as follows: Take of fresh hemlock leaves any quantity, express the juice in a tincture press, set it aside for forty-eight hours, pour off the clear, supernatant liquor from the fecula and chlorophylle which it has deposited, and lastly, add to it a fifth part, by measure, of rectified spirit. This preparation I have found to keep well for two years, and its uniform strength, as well as the facility with which we can increase or diminish the dose we are administering, gives it a decided advantage over either the extract or powder of the fruit or leaves. The best time for gathering the leaves is when the plant is in full flower, and previous to submitting them to expression the stalks should be carefully picked out and rejected, the leafy part alone being used. As in many instances it is often of great advantage to possess an active preparation of a remedy in a solid state, I have tried many ways of preparing an extract of hemlock which would retain unimpaired the medicinal powers of the plant, and the best I find is to be obtained by submitting the expressed juice, prepared as above, to spontaneous evaporation; but even this extract, no matter how well and carefully preserved, soon loses all traces of *conia*.

Hemlock, when administered in medicinal doses to an individual labouring under disease, appears to me to produce its beneficial effects by allaying nervous excitability, and diminishing muscular pain; under its use also, both the force and frequency of the heart's action are lowered, but in no instance have I seen it produce the least tendency to drowsiness or sleep. This is quite consonant with the account given by Christison of the action of hemlock when its poisonous effects are produced; "that it does not excite convulsive spasm, or bring on insensibility, but that it exhausts the nervous energy of the spinal chord and voluntary muscles, occasioning merely convulsive tremors, and slight twitches, and eventually general paralysis of the muscles, and consequent stoppage of the breathing." The active principle, *conia*, according to the same able authority, produces a similar remarkable action on the spinal chord, "a few drops killing a small animal, such as a rabbit, cat, or puppy, in a few minutes, causing a general paralysis, slight convulsive tremors, and death from the suspension of the breathing, without any alteration in the appearance of the blood." Such being the effects of hemlock, and its alkaloid, when given in poisonous doses, it can be readily understood that when administered as a medicine it will produce no very apparent physiological action, and that in producing beneficial results, it appears to act insensibly on the system. The only manifest effect

which I have seen it produce is where its use has been persevered in for some time, or the doses rapidly increased, when the patient generally complains of a disagreeable sensation of dryness of the throat; with a feeling of constriction and difficulty of swallowing, amounting to actual pain, and which always compels us either to suspend the use of the medicine altogether for a few days, or greatly to diminish the dose in which it has been given.

The diseases in which I have administered hemlock with decided advantage are rheumatic affections, both subacute and chronic, particularly when attended with severe pain, neuralgia, and senile gangrene. And although I have employed it very extensively, both in hospital and private practice in those diseases, I have met with but very few instances indeed in which this remedy failed to afford relief: nevertheless, some cases occasionally occur, in which, as is the case with most other medicines, it does not appear to produce the least benefit. I shall now proceed to give a short abstract of a few cases in illustration of the therapeutical virtues of this drug, a perusal of which will show the precise character of the disease in which it proves most beneficial.

CASE I.—Obstinate rheumatic Pains from Exposure to Cold and Wet. Reported by Mr. MENIFOLD.—Lackey M'Cormick, a labourer on the Dublin and Drogheda Railway, aged 32 years, of a strong, robust appearance, with a sallow complexion, and sanguineous temperament, was admitted into Jervis-street Hospital, April 14th, 1843. He complains of a dull, aching pain in the inferior dorsal and lumbar regions, stiffness in the shoulders and knee-joints, and occasionally at the fingers at the metacarpo-phalangeal articulations, in short, he states that the only joints in his body which have been wholly exempt from pain and stiffness (not even excepting the temporomaxillary articulations) are the elbow-joints. Some puffiness is apparent in the shoulder and knee-joints, but there is no redness, nor is pain increased on pressure. The pains appear to be erratic, as they frequently disappear from one joint, and as suddenly seize another; they are more distressing in the afternoon, but are not aggravated by the heat of the bed, or by any increase of temperature. His pulse is at present slow and weak; skin cool, not perspirable; tongue clean; bowels constipated; appetite good; urine healthy, both in appearance and quantity.

He has been engaged as a labourer on the railroad for the last two years, previous to which time he had been at work in Scotland, but always enjoyed good health until he came to Dublin. His occupation has obliged him of late to be up frequently at night in the most severe weather, and to be exposed to the greatest vicissitudes of temperature. After a severe wetting on one of those occasions, about five months since, he was attacked with severe pains in nearly every joint in his body, but he continued to work without intermission, although suffering severely, until the last few weeks, when, in consequence of the pains and stiffness of his joints increasing so much, he

was compelled to give up work and apply for admission into the hospital.

On the 5th of April, the day after his admission, he was ordered house medicine, so as to act on the bowels freely, and on the following day he was directed to take 30 minims of the *Succus Conii* three times a day in a glassful of water.

April 11th. Since last report M^cCormick has gradually improved, and is much freer from pain, which seems now to be principally confined to the shoulder-joints and to the small of his back. The dose of the hemlock-juice was increased to 40 minims three times a-day. The bowels being confined, he was also ordered house medicine to-day.

April 14th. Much freer from pain to-day, but complains of a disagreeable sensation of dryness of the throat, accompanied with a feeling of constriction, and some difficulty of swallowing. The drops were omitted, and he was ordered saline cathartic mixture.

April 16th. Since the omission of the drops the pains have again become more severe, but the unpleasant sensation about the throat has quite disappeared. To take a grain of the extract of hemlock (prepared by the spontaneous evaporation of the expressed juice) every night at bed-time.

April 18th. Twenty minims of the *Succus Conii* to be taken three times a-day: the pill to be continued.

April 24th. Much improved to-day, the pains being now confined to the shoulder-joints, and not occurring until towards nightfall. The dryness of the throat and difficulty of swallowing have, however, again returned. House medicine, so as to effect the bowels; the drops to be omitted. To take one grain of the extract of hemlock three times daily.

May 1st. Quite free from pain to-day. Ordered, at his own request, a warm bath to-night.

May 3d. McCormick was discharged to-day perfectly cured.

I have given the details of this case pretty fully from the hospital case-book, as it illustrates well the form of the disease in which I found hemlock prove most useful, and also as it was one in which I found the peculiar constitutional effects, which I before referred to, were most manifestly induced. The following cases are more condensed.

Case II.—*Severe chronic Arthritis with Swelling and Deformity of the Joints.* Reported by Mr. MANDEVILLE.—John Nowlan, aged 56, a cow-driver, was admitted into Jervis-street Hospital March 8th, 1843. He complains of agonizing pains in all the joints of his fingers and toes, as also in the shoulders and knees, which almost completely deprive him of rest day or night, and render him altogether incapable of following his usual occupation. All these joints are considerably swollen and deformed, the legs being semi-flexed, on the thighs, and the fingers forming an angle with the metacarpal bones, slanting outwards towards the ulna. The swollen parts are slightly reddened,

and the pains are aggravated by pressure or motion, but scarcely, if at all, by external warmth. The pulse is small; skin bathed in a clammy perspiration; tongue loaded with a white fur; appetite bad; bowels constipated; urine high coloured; countenance indicative of much suffering.

He states that his present illness commenced about twelve months ago, and that it was caused by his being compelled to sleep constantly in the open air at night, and frequently on the wet grass. Since that time it has gradually increased in severity, attacking joint after joint, and for the last two months he has been so crippled that he has been scarcely able to move.

On the day of his admission into the hospital he was ordered a saline cathartic draught, and on the 9th of March, the next day, he was directed to take 30 minims of the *Succus Conii* four times daily.

March 13th. Pains remarkably relieved; swelling also, particularly of the knee-joints, considerably diminished. He got out of bed to-day for a short time, and states that he was able to move about with much more ease to himself than he could for the last three months. To take 40 minims of the hemlock-juice three times a day, and to have house medicine to free the bowels.

March 23d. The drops have been continued steadily since last report without producing the least apparent constitutional effect. He appears considerably improved, expressing himself tolerably free from pain, and as possessing much more power of motion in all his joints. The articulations of the fingers and toes are now but slightly swollen, and have, at the same time, regained much of their natural appearance; the knees are, however, much enlarged and painful, particularly at night. The dose of the *Succus Conii* to be increased to 60 minims three times daily.

March 31st. As Nowlan complained of some dryness of the throat to-day, with slight difficulty of swallowing, he was ordered to take two cathartic pills immediately, to omit the drops for this day, and to have a warm bath at bed-time.

April 5th. The hemlock-juice was repeated on the 1st instant, and continued until this day, when the same symptoms having occurred as on the 31st of March, a repetition of the treatment as on that day was directed.

April 15th. The same dose of the *Succus Conii* was continued up to this date, when Nowlan, was discharged from hospital, expressing himself quite free from pain, and, to use his own words, able to walk almost as well as ever he was in his life. The swelling and stiffness of the knees are quite gone, and it is really astonishing how little deformity remains in the joints of the fingers. Nowlan's wife came to the dispensary, about a month after his discharge, to say that he remained quite well.

Case III.—*Sub-acute Rheumatism confined to the muscular part of the Calves of both Legs.* Reported by Mr. BRAY.—James Barrett, aged 57, a gardener, was admitted into Jervis-street hospital, June

29th, 1844, complaining of a dull, heavy pain in the muscular part of his legs, extending from the inferior termination of the popliteal space to within about an inch of the malleoli. The pain is rendered most excruciating by his standing, or placing his limbs in any other than a horizontal position: he was carried into the dispensary, and while there lay on the ground, being totally unable to stand. With the exception of his present attack, he states his health to be excellent; the pulse is regular, tongue clean, bowels free; he passes about three quarts of very pale urine in the twenty-four hours, which does not contain any albumen; the whole surface of the body is constantly bathed in a clammy perspiration. The countenance is indicative of much suffering.

He states that about a fortnight since he was attacked with headache and obstinate constipation, accompanied with profuse perspirations, during the continuance of which he went to mow in wet grass. He remained at this employment for four or five days, when he was suddenly seized with an acute pain in the calves of both legs, which has continued since without intermission. For the last week he has been rubbing the parts with soap liniment, and has also taken some medicine, but from neither did he receive the least benefit.

On admission he was ordered a dose of cathartic medicine and a warm bath, and the following day, June 30th, he was directed to take 15 minims of the *Succus Conii* three times daily. On the 2nd of July the dose was increased to 15 minims every sixth hour. The report of the 9th of July states that he only finds a slight pain, when he stands, in the calf of the right leg, but that the left is quite well. July 13th he was entirely free from pain, and could walk with ease; and on the 14th he was discharged from the hospital cured.

Case IV.—*Acute Rheumatism*. Reported by Mr. BRAY.—John Eggar, aged 36, musical instrument-maker, was admitted into Jervis street hospital, July 27th, 1844. He gives the following history of his illness. In working at his trade he is much subjected to extremes of temperature, but, notwithstanding his having been a hard drinker all his life, was in the enjoyment of excellent health until lately. About six months ago he felt a shooting pain in his right breast, which used to shift to the same situation on the other side, and continued thus alternating, being sometimes absent. Twelve days since, on getting up in the morning, he felt an acute pain in the left instep, which, on examination, he found to be red, swollen, and excessively tender to the touch. This was treated by the application of eight leeches, which gave him some temporary relief, but on the same night the left knee was similarly attacked; and in two days afterwards the ball of the left thumb, and, consecutively, the fingers, arm, and shoulder of that side. A pain in the small of the back, which was also present from the first, became much worse, and after four days the disease spread to the hand, arm, shoulder, and breast of the left side. During this time he was attended by a physician, who treated him by the application of sinapisms to the affected parts, and put him

under a course of mercury, which salivated him so severely that he has expectorated nearly a pint of saliva within the last twenty-four hours.

As he now lies in bed he is free from pain, except in his right arm and shoulder, where there is a settled sensation of soreness; but on the least movement in the neighboring muscles, his legs and back, together with his left arm and breast, are seized with the most acute pain, while the soreness on the right side is likewise much increased. He is thus unable to use the least motion, and he cannot even stand, much less walk. The tongue is loaded with a thick white fur, yellow in the centre; pulse 65, hard and incompressible; bowels constipated; whole body, particularly the head, covered with profuse perspiration.

On the 28th of July he was ordered an active saline cathartic, and a gargle containing solution of chlorinated soda.

July 29th, the following mixture was ordered:

R. Succi Conii, f. ʒss.
Misturæ Camphoræ, f. ʒvii. ss.
M. Cochleare amplum sextis horis.

July 31st. Much improved. To take a table-spoonful of the mixture every fourth hour.

August 5th. The pains are all gone to-day, except in the ball of the thumb, and the wrist and ankle of the left side, which are somewhat swollen and red. Two table-spoonfuls of the mixture to be taken every fifth hour.

On the 6th of August the dose was again diminished to a table-spoonful every fourth hour, as he complained of dryness of the throat, and some pain in the head. On the 8th he only complained of a little stiffness in the left ankle-joint, and of a tired feel in his arms. On the 9th the medicine was stopped, and he was ordered a warm bath; and on the 11th he was discharged from the hospital perfectly cured.

I have now detailed four cases of rheumatism, none of which are precisely similar in character; and the hospital reports for the last two years contain many others which were rapidly and effectually cured by the use of an efficient preparation of hemlock; and that the recovery was solely due to the use of this remedy is sufficiently evident from the fact, that it was the only medicine used in any of the cases. I do not, however, pretend to say that hemlock will cure every case of chronic rheumatism, a disease so intractable in its nature, that, to use the words of that eminent clinical physician, Dr. Graves, "there is scarcely any affection which tasks the ingenuity and tries the patience of a medical man more." The following case was one of those in which the remedy, at first, appeared to afford some relief, but afterwards failed to produce any benefit.

Case V.—*Chronic Rheumatism caused by constant exposure to damp.* Reported by Mr. BRAY.—John Duffy, aged 25, a labourer on the Dublin and Drogheda railway, was admitted into Jervis-street hospital, June 21st, 1844, complaining of pains in both his legs, from the thighs downwards, in both shoulders, in the back of his neck,

and in the right arm. The pains are intense, are never absent, and are much increased by the least muscular effort. The right side is more affected than the left, particularly the shoulder, and the left arm is, as yet, free from pain. He states that for the last fourteen years, he has been constantly engaged as a labourer in the construction of various public works, where, from the nature of his employment, he was much exposed to damp, having been frequently for hours together up to his breast in water; and also that from habits of intemperance he has often lain out at night exposed to the inclemency of the weather. He has, however, enjoyed good health until about five months ago, when the pains first commenced in his right knee and shoulder, since which time they have gradually increased in severity, attacking in succession nearly every joint in his body.

On his admission, the bowels being regular, the tongue clean, and the appetite good, he was immediately put under the use of the *Succus Conii*, being ordered to take 20 minims of it four times a day. On the 25th the dose was increased to 20 minims every fourth hour. On the 28th he expressed himself as being much relieved; the dose was now increased to 25 minims every fourth hour. July 2nd, he complained of dryness of the throat, with some pain in the head, when the dose of the medicine was again reduced to 20 minims every fourth hour. On the 9th of July the following report appears in the case book: slight effusion is now evident in the synovial membranes surrounding the right knee and both shoulder-joints, and on the whole the pains are much worse than on his admission into the hospital; the use of the hemlock was therefore suspended. This patient was afterwards discharged from the hospital, July 30th, considerably relieved, but not cured; the subsequent treatment adopted having been Colchicum, Aconite, Dover's powder, and warm baths.

I have also stated that I have employed hemlock, with benefit, in the treatment of neuralgia, and of senile gangrene. In the former of those diseases it will, like all other remedies, be found frequently to fail in affording relief; and, on the other hand, it will often prove successful in cases which have resisted the use of numerous other medicines. The following short case will, I think, sufficiently illustrate its beneficial influence in this disease:

Case VI.—*Facial Neuralgia*. Reported by M. FITZGERALD.—Mary Fulton, aged 21, a servant, was admitted into Jervis-street hospital, May 13th, 1844, complaining of intense shooting pain in the left side of the face. The pain is not constant, but comes on in acute paroxysms, the intermission between which, however, is of very short duration; it is most severe towards evening, and during the night, so as almost completely to deprive her of sleep. She describes it as commencing in the cavity of the ear, and darting forwards towards the supra and infra-orbital foramina; sometimes it extends up to the forehead and head, and to the side of the nose, but it never passes the mesial line. During the paroxysm the surface of the face is painful to the touch, and the least motion of the muscles of the jaw,

even talking, produces intolerable anguish. Her general health is good, and all the functions normal; the face is indicative of much suffering.

She states that the disease occurred about eighteen months ago, since which time it has been gradually increasing in severity; at first, intervals of six weeks, or two months occurring, during which she would be completely free from pain, but of late the intervals have not been longer than from two to three weeks. The attack is always much more severe when the bowels are constipated; prolonged constipation having been, she thinks, the original cause of the disease; at present the bowels are quite regular. Since the commencement of the disease she has been submitted to a great variety of treatment, such as cupping, leeching, blistering, large doses of iron, mercury, bark, and turpentine; the latter of which, alone, appeared to afford her the least relief. On the day of her admission, May 13th, she was ordered to take 20 minims of the *Succus Conii*, three times a day, in a glassfull of water.

May 15th. Much improved; she says that she is completely free from pain for nearly an hour after she takes each dose of her drops. She was ordered to take 15 minims every four hours.

16th. Bowels constipated, nevertheless the pains are less. To have two cathartic pills immediately; the drops to be continued.

23rd. Expresses herself as being quite free from pain for the last two days, and feeling perfectly well. The hemlock-juice was continued in the same doses since last report; it did not produce any dryness of the throat or difficulty of swallowing. Discharged.

July 30th. Fulton sent to the hospital to-day from the country, stating that she had remained perfectly free from the least return of pain since she left the hospital, a period of more than two months, until within the last few days, when she had a slight attack; and to ask for a small bottle of the drops.

In two cases only of senile gangrene have I had an opportunity of trying the effects of hemlock, and in both I have found it an excellent adjunct to opiates. In one of those cases, which occurred in private practice, and in which the disease lasted from the 9th of May to the 29th of June, 1843, the mortification having reached nearly as high as the knee before the disease terminated fatally, the most distressing symptom was a constant twitching of the tendons of the affected limb. This unceasing cause of suffering was not in the least alleviated by the use of the opiates which were administered, but was at once removed by the use of the hemlock-juice, and by a perseverance in its employment was kept completely in check throughout the whole of the illness.—*Dublin Journal*.

PART III.—MONTHLY PERISCOPE.

Epilepsy cured by Blisters.—The subject of this case was treated at the Hotel-Dieu, by Dr. Recamier, a bold and ingenious physician, who has made more than one discovery in the science of therapeutics. It is well known that a paroxysm of epilepsy is usually announced in some cases by a peculiar sensation in certain parts of the body, most frequently in one of the limbs; a sensation to which we have applied the term *aura epileptica*. It has been thought that by preventing the *aura* we should arrest the epilepsy, and occasionally it has succeeded. A tight ligature has been placed above the spot at which this *aura* starts; escharotics, setons, and even the actual cautery have been resorted to for the same purpose. M. Recamier sought to oppose an effectual barrier to the passage of the *aura*, and thus prevent its reaching the head, by means of *circular* blisters; with this view he pursued it and attacked it with flying blisters at every point where it declared itself, and in one month, by means of eight blisters judiciously applied, he effected a radical cure of this intractable disease. It has now been three years since this case was thus treated, and yet there has been no relapse. As this case is curious, and will suggest the proper method to be pursued, we will relate it.

A tailor, aged 32, was seized on the 9th Nov., 1839, without any assignable cause, with an attack of epilepsy, and loss of consciousness. During the attack he fell into the fire and burned his right thigh, without being conscious of it. From this period to the 7th Dec., when he entered the Hotel-Dieu, (about a month,) he had eight such seizures, but less violent; three of which were accompanied with loss of consciousness. The attack was ushered in by a trembling and a vibration which was felt only in one half of the body, and at the same moment the patient experienced a cramp in the left ankle; these premonitory symptoms continued for a few seconds, at the end of which time the attack was ushered in. After the first attack, the left leg, from the foot to the middle of the thigh, remained benumbed and half paralyzed. Up to the 21st Dec. he had experienced two paroxysms—one strong, the other feeble. The seizure came on with cramps in the left ankle, then swelling and livid redness of the face, contraction of the muscles of the face, which became hideous; frothing at the mouth, a hoarse voice, throwing the head forward and backward, tetanic rigidity of the trunk, convulsive respiration, contortions of the arms, &c. The paroxysm lasted more than ten minutes, and the patient returned to himself ignorant of what had transpired. M. R. placed a circular blister about three fingers wide around the calf of the leg, above the spot where the cramp was felt.

In three days the cramp was felt in the lower part of the thigh, and was followed by an attack of epilepsy; a second blister was

made to surround the thigh entirely. After the application of these two blisters, the paralysis of the leg was in a great measure removed, and the patient was enabled to walk with greater facility. On the 2nd of Jan. the left foot was numb; a blister was ordered to the foot, and the numbness disappeared. On the 6th, had pains in the leg; circular blister above the painful spot; the pain disappeared. On the 10th, patient felt, for two days, shocks and *formica*, extending from the left hip to the mamma of the same side, with a tendency to another epileptic attack; a blister was placed so as to engirdle the lower part of the chest. On the 18th the patient complained of a painful sensation of pricking, above the right mamma, and a painful numbness above the instep of the right foot; a blister around the neck, and another below the calf of the right leg. On the 22nd Jan. some shooting pains from the elbow to the left shoulder; blister in the form of a bracelet above the elbow; besides, the patient was ordered to take, morning and evening, the following pill:

R. Oxyd. Zinci.	1 gr.	} M.
Camph.	$\frac{1}{2}$ gr.	
Ext. Belladon.	$\frac{1}{2}$ gr.	

On the 25th the patient thought the pricking sensation mounted from the foot to the left knee, and from thence to the groin; the pills alone were continued. 26th, numbness in the back, and constipation for four days; ordered a purgative lavement, which procured a free operation, and with it disappeared the numbness. Jan. 27th, the sensation of formication remains constantly in the left leg; the last blister was made to surround the thigh, and all unpleasant symptoms disappeared. From this day up to March, at which time the patient quitted the hospital, no symptoms of the former disease were experienced; the pills were however continued for about three weeks. The disease did not return.—*Bulletin de Therapeut. and N. Orleans Jour.*

Useful hint on the Treatment of Chronic Rheumatism and Neuralgia: By Dr. JAMES JOHNSON.—A tea-spoonful of brimstone in a small cupful of milk, taken every night at bed-time for a week or two together, is one of the best of all remedies that we know of, against old obstinate rheumatic aches, cramp of the legs, the pains that are connected with a varicose state of the veins, chronic sciatica, &c. The well known nostrum—the “Chelsea Pensioner”—that has so long had high repute in chronic rheumatism, is mainly indebted to sulphur for its virtues. It may be worth while to mention its composition. It is made thus:—R. Flor. Sulphuris $\mathfrak{z}\text{ij}$. Pot. Supertartrat. $\mathfrak{z}\text{ij}$. P. Guaiaci $\mathfrak{z}\text{j}$. P. Rhei $\mathfrak{z}\text{ij}$. Spir. Nucis Myristic. $\mathfrak{z}\text{ij}$. Mellis q. s. ut fiat electuarium.

The dose, one or two drachms every morning and evening.

[*Med. Chir. Review.*]

Iodide of Potassium in Asthma. By W. B. CASEY, M. D.—I have now made use of the medicine in some twenty-five or thirty cases

of Asthma, some of them very severe and aggravated; and so far, in no one instance, when a fair trial has been made, has it failed to afford unequivocal and decided relief. As a general rule the patient is benefitted after a few days employment of the article, but some cases will require more time, perhaps weeks, before they improve; in one of mine, a very severe case of over twenty years duration, I persevered for nearly three months, before there was any decided amendment. In almost one-fourth of my cases, relapses have occurred after discontinuing the remedy; this occurrence however was in most cases owing to severe attacks of catarrh, or to errors in diet and consequent derangement of the digestive organs, which by the way should never be overlooked in the treatment of Asthma. From two to five grains of the Iodide of Potassium, given three times a day, dissolved in water or some syrup, as for instance that of Sarsaparilla or Tolu, will generally be found sufficient for ordinary cases of the disease. Its continuance must be regulated by the circumstances of each case.—*N. Y. Jour. of Med.*

Pains of the Loins. By Dr. OKE, *Southampton*.—Perhaps there is no symptom more commonly met with in practice than pain in the loins, which is usually and at once attributed to bile, gravel, or rheumatism; but as it may be also derived from other causes left out in a hasty decision, I shall enumerate them, and endeavor to point out the symptoms by which each may be distinguished. Pain of the loins may be derived from the muscles, from the liver, from the duodenum, from the kidneys, from the colon, from the uterus, from the aorta, from the spine, or from matter collected on the psoas muscle independent of spinal disease. In order to arrive at its true cause, we must endeavor to ascertain what function is principally involved, which will at once lead us to it.

If the pain be rheumatic, it will be increased by pressure, and by the slightest action of the muscles affected. There will probably be also rheumatism in other parts of the body, the system will not evince much disorder, the urine will be high colored, and deposit a lateritious sediment.

If derived from the hepatic function, the pain will shoot upwards along the splanchnic nerves to the scapulæ; the alvine evacuations will be either deficient in, or exuberant with, bile; or show a morbid quality of that secretion; the urine will have a bilious tinge; there may be congestion of the hæmorrhoidal veins; and the spirits will be depressed.

If from the duodenal function, three or four hours after a meal the pain will be aggravated, shoot through towards the right side of the abdomen, and remaining till the food has passed into the jejunum. Dyspeptic symptoms will prevail, and there will frequently be painful pustules breaking out about the face. I have lately met with a case in which the boils were extremely annoying.

If from the kidneys, the pain will shoot down the course of the

spermatic nerves towards the round ligament in the female, and towards the testis in the male, which will often be retracted by the action of the spermatic nerves upon the cremaster muscle. There will be more or less irritation communicated to the mucous membrane of the bladder. The urine also will be diagnostic in this instance; it may deposit mucus, calculus matter, blood, pus, or albumen, according to the nature of the case; or it may be otherwise morbid in its constitution.

If from the uterus, the pain of the back will arise either from disordered function or disease of that organ. In the former case the pain will be of a neuralgic character, will return in forcing paroxysms, extending around the hips and hypogastric region, will be attended with hysteria, and often with increased quantity of the menstrual discharge. In the latter case the pain will be *constant* and severe, extending along the anterior crural nerve half way down the thighs. There will be a thin, offensive discharge from the vagina. The countenance will be wan and sallow, exhibiting the wear and tear of organic lesions.

If from the colon, there will be constipation, and inflation in the course of the bowel, or the fecal discharges will be of small diameter, or there will be soreness of the intestine under pressure, especially at its ascending or descending portions, accompanied by mucus, or shreds of lymph in the form of boiled vermicelli, amongst the excretions.

If from arterial dilatation, an abnormal pulsation of the vessel involved—the aorta, for instance—may possibly be detected by auscultation, in the incipient stage of the disease, *if such were suspected*; but in a large majority of cases, such a cause may reasonably escape the attention of the ablest surgeon, from there being no tangible symptom that might lead him to suspect it; and even after the dilatation has considerably advanced, it may be sufficiently large to press upon and disturb the spermatic nerves, but not large enough to project and pulsate externally, and this may, at this stage, be confounded with diseases of the renal function. A few years ago I met with a case of this kind in a man of middle age. The pain had been constant and wearing, shooting from the loins down the course of the spermatic nerves, and for a considerable time was reasonably attributed to the renal function, especially as there had been constant disturbance of the function. At length the aneurismal sac began to approach the surface, and then, of course, the cause became apparent.

If from disease of the spinal column, the pain will be aggravated by percussing the spinous processes at this part of the spine, or by suddenly striking the toes against an uneven surface. There will be involuntary action of the muscles, especially of the flexors of the legs, diminished temperature, abnormal feelings, and more or less loss of power of the lower limbs. Should there be at the same time any unnatural projection of the spinous processes, the disease will be confirmed.

If from a collection of matter upon the psoas muscle, unconnected with spinal disease, the pain will be continued, dull, and deep-seated, extending from the loins down the psoæ, or in whatever direction the matter may have taken its course. The pain will be aggravated by flexing the thigh towards the abdomen, and there will be difficulty in walking; moreover, there will be marks of a strumous habit, and more or less symptoms of hectic fever. Should any fluctuating tumour present at the groin, or at any other point where the matter may find its way out of the body, it will be conclusive as to the nature of the case.—Prov. Med. Jour.

Antidotes of Corrosive Sublimate, Copper, Lead, and Arsenic. By MM. BOUCHARDAT and SANDRAS.—By means of numerous experiments, first made in the laboratory and then repeated on dogs, MM. Bouchardat and Sandras have arrived at many interesting results relative to the antidotes of corrosive sublimate, copper, lead, and arsenic. All these are detailed at length in their long papers on the subject. Their conclusions were, that the following substances may be regarded as antidotes, and employed as such in medicine:

As antidotes for corrosive sublimate.—A mixture of zinc and iron filings; or powder of iron reduced by hydrogen; or the moist persulphuret of the hydrated peroxide of iron.

As antidotes for copper.—A mixture of zinc and iron filings; iron reduced by hydrogen; porphyrized iron; zinc filings; or the persulphuret of the hydrated peroxide of iron.

As an antidote for lead.—The moist persulphuret of the hydrated peroxide of iron.

As antidotes for arsenic.—The moist hydrated peroxide of iron; the dry hydrated peroxide of iron; and the moist persulphuret of the hydrated peroxide of iron.

These experienced chemists add the following reflections:—This last preparation, the persulphuret of the hydrated peroxide of iron, possesses this superior advantage over all the rest, that it changes the nature of all the four poisons above noticed, and is especially applicable in those cases where we have not had time to find which of the poisons has been taken. As to the manner of administering these antidotes, and the doses which it is necessary to administer, the simplest means appear the best. The powders of zinc and iron may be suspended in any electuary, or they may be swallowed in water paper. The magma of the hydrated preparations of iron may be swallowed in the form of jelly, in which they are procured from the druggists. Several draughts of lukewarm water ought to follow the antidote, and the fauces be tickled with a feather, to excite vomiting and the expulsion of the poison. The efforts at vomiting scatter more effectually over the stomach the antidote which is administered. As to dose, the experiments proved that 100 grains of the powder of iron or of zinc sufficed to prevent any bad effects from 15 grains of the acetate of copper. Fifteen drachms of the moist magma of the per-

sulphuret were required to produce the same effect with the same dose (15 grains) of the acetate of copper. To act as an antidote to $4\frac{1}{2}$ grains of arsenious acid, 15 drachms of the moist magma of the persulphuret, or 30 drachms of the moist hydrated peroxide of iron, or 20 drachms of the dry hydrated peroxide of iron, were required. With regard to the time when these antidotes can be administered with advantage, in so far as the acetate of copper is concerned, the lapse of 40 minutes from the time of swallowing the poison ought not to be regarded as a sufficient reason for not administering the antidote; but arsenic is more quickly absorbed. Nevertheless, the antidote should always be administered, because, though it will not neutralize what is absorbed, it will prevent its further absorption, by decomposing what remains in the stomach.—*Edinburgh Med. & Surg. Journal.*

Caution in giving Albumen as an Antidote.—Practitioners, in employing albumen as an antidote to corrosive sublimate, should be aware that it may be given in too great quantity, as the compound formed is soluble in an excess of albumen, and in the deleterious combination which enters the blood, producing the remote influence of the poison. So long as the vomited matters contain a white opaque material admixed, the antidote should not be withheld; when the *ejecta*, on the contrary, become transparent, the further employment of the remedy is generally useless, and may be injurious.—*Am. Jour. Med. Sciences*, from *Dublin Medical Journal*.

Selection from the Formulary of Bielt on Diseases of the Skin. (From the work of M. CAZENAVE, translated by Dr. BURGESS:—)
Internal Remedies.—Subcarbonate of soda, half, to one drachm; barley-water, one pint. Dose.—Four glasses daily. Use.—Lichen; prurigo; chronic diseases with itching.

Decoction of dulcamara.—Dulcamara, half an ounce; water, a pint and a half. Boil down to two thirds. The quantity of the remedy may be increased to one ounce, or an ounce and a half. Dose.—Half a glass at first; then a glass, morning and evening. Use.—*Lepra vulgaris*; chronic diseases.

Decoction of orma.—Orma pyramidalis, four ounces; water, four pints; boil down to a half. Dose.—Two to four glasses a day. Use.—Scaly diseases.

Syrup of fumaria, twelve ounces; syrup of viola tricolour, four ounces; bisulphate of soda, two drachms. Mix. [M. Bielt often employed this mixture in cases of eczema, lichen, and several chronic diseases of the skin.] Dose.—Two spoonfuls a day.

Syrup of fumaria, a pint; bicarbonate of soda, three drachms. Dose.—Two tea-spoonfuls; one before breakfast; the other at bedtime. Use.—Eczema; lichen; prurigo.

Pearson's solution.—Arsenite of soda, four grains; water, four ounces. Dose.—From twelve drops to a drachm or more. Use.—

Most chronic diseases of the skin; eczema, impetigo, lichen; but chiefly in squamous diseases, lepra, psoriasis, &c.

Fowler's solution.—Arsenious acid, and carbonate of potash, of each seventy-eight grains; distilled water, a pint; alcohol, half an ounce. Use.—The same as Pearson's solution. Dose.—Three or four drops, gradually increased to twelve or fifteen.

M. Bielt's solution.—Arsenite of ammonia, four grains; water, four ounces. Use.—Same as above. Dose.—Same as Pearson's solution.

Larrey's Syrup.—Sudorific syrup, one pint; bichloride of mercury, hydro-chlorate of ammonia, and extract of opium, of each five grains; Hoffman's liquor, half a drachm. Dose.—Half an ounce to two ounces. Use.—Syphilitic eruptions. Syrup of mezereon, two ounces; balsam of tolu, four ounces; subcarbonate of ammonia, half an ounce. Dose.—A spoonful, morning and evening. Use.—Constitutional syphilis.

Van Suieten's liquor.—Bichloride of mercury, eighteen grains; water, twenty-nine ounces; alcohol, three ounces. Dose.—A teaspoonful, daily, in a glass of decoction of sarsaparilla. Each ounce contains a little more than half a grain. Use.—Secondary syphilis.

Powders. Pills.—Sublimed sulphur, magnesia, of each half an ounce. Make eighteen packets. Dose.—One, daily. Use.—Chronic eczema; scaly diseases.

Proto-ioduret of mercury, twelve grains; extract of lettuce, two scruples. Make forty-eight pills. Dose.—One to four. Use.—Syphilis. Or,

Proto-ioduret of mercury, half a drachm; extract of guaiacum, one drachm; extract of lettuce, two scruples; syrup of sarsaparilla, q. s. Divide into seventy-two pills. Dose.—One, and then two, daily. Use.—Syphilis.

Bichloride of Mercury.—Extract of aconite, six grains; bichloride of mercury, two grains; marshmallows powder, eight grains. Make eight pills. Dose.—One to four. Use.—Syphilis.

Deuto-ioduret of Mercury.—Deuto-ioduret of mercury, six grains; marshmallows powder, half a drachm. Make thirty-six pills. Use.—The same. Dose.—Two or three a day.

M. Sedillot's pills.—Strong mercurial ointment, one drachm; soap, two scruples; mallows powder, one scruple. Make thirty-six pills. Dose.—Two or three, daily. Use.—The same.

M. Bielt's pills.—Mercurial ointment, powdered sarsaparilla, of each a drachm. Make forty-eight pills. Use.—The same. Dose.—One to four, daily. Or,

Phosphate of mercury, half a drachm; extract of fumaria, one drachm. Make forty-eight pills. Dose.—One to two a day. Use.—As before.

Aconite pills.—Extract of aconite, half a drachm; mallows powder, two scruples. Make forty-eight pills. Dose.—One or two, morning and evening. Use.—Syphilitic eruptions; nocturnal pains.

Asiatic pills.—Arsenious acid, one grain; black pepper powdered,

twelve grains; gum arabic, two grains; water, q. s. Make twelve pills. Dose.—One or two a day.

Arsenite of iron. *M. Biett.*—Arsenite of iron, three grains; extract of hop, one drachm; mallows powder, half a drachm; orange flower syrup, q. s. Make forty-eight pills; each contains the one-sixteenth of a grain. Dose.—One, daily. Use.—The two preceding formulæ are chiefly used in cases of chronic eczema and lichen; in the scaly diseases, lepra, lupus, and psoriasis.

Arsenite of soda. *M. Biett.*—Extract of aconite, one scruple; arsenite of soda, two grains. Make twenty-four pills. Dose.—One or two, daily. Use.—As above.

Hydrochlorate of iron.—Hydrochlorate of iron, twelve grains; gentian, in powder, twenty-four grains. Make twelve pills. Dose.—One to four, daily. Use.—Employed with success by *M. Biett* in scrofulous eruptions.

Sulphate of iron. *M. Biett.*—Sulphate of iron, one scruple; powdered mallows, twelve grains; syrup, q. s. Make twelve pills. Use and dose, the same.—*Lond. and Ed. M. J. of M. S.*

Ulceration of the Cornea.—*The danger of employing certain collyria in diseases of the Eye.*—*M. Florient Cunier* has recently called the attention of practitioners to the evil effects of combining opium and its preparations with solutions of the metallic salts, such as zinc, copper, silver, &c., in the treatment of ophthalmia, and ulcerations of the cornea. When such mixtures are made, we have, says he, on the one hand, a sulphate, a carbonate, a nitrate, &c. of morphine; on the other, an insoluble meconate of zinc, of copper, of lead, of silver, and so on, which is precipitated to the bottom of the phial. Before the mixture is instilled into the affected eye, the vessel is usually shaken; the meconate is thus suspended, and, in this form, brought in contact with the eye, and should there be any ulcers upon the cornea, the mixture will be sure to lodge in such ulcers. In this way, we create a great number of specks—of supposed *albougos*, against which we may bring the materia-medica to bear, but in vain.

These facts *M. C.* corroborates by adducing a very striking instance, the principal circumstances of which we shall present to our readers. An English gentleman, in attempting to open a bottle of ammonia, received a few drops of the fluid into his eye. A physician being immediately called, prescribed cold fomentations, and the pain assuming more intensity in the evening, an opiate saturnine collyrium was ordered. This treatment, aided by leeches and calomel, pushed to pyalism, produced no relief. The patient consulted in succession many London surgeons, who diagnosed an *albougo*, the result of a burn, and subjected the patient to every variety of treatment without any success. Three years afterwards, this man came to consult *M. Cunier*, who found him in the following condition:—The lids of the eye were spasmodically closed; when *M. C.* attempted to separate them, a flood of tears deluged his cheek; the patient suddenly threw

his head back, rose from his seat, hastened to his room and seemed to be agitated, alternately opening and shutting his lids, violently contracting the muscles of his face on the painful side, as persons are wont to do when any foreign body is admitted into the eye. After a few minutes the patient reseated himself, and M. Cunier resumed his examination.

The conjunctiva was highly injected; the cornea, over three-fourths of its extent, presented a shining yellowish white appearance; around its border were eight or ten large vessels, which terminated abruptly. The internal face of the lower lid, presented two or three small points of the same color, as the spot on the cornea. M. Cunier, after an attentive examination, and being well assured as to the nature and composition of the first collyrium, diagnosed an incrustation of lead upon the cornea, and at once proposed to remove it.

After some hesitation and delay, the patient consented, and M. Cunier proceeded in the following manner to perform it.

The patient was seated in an arm chair, the head resting against a pillow. Standing behind him the operator adjusted a blepharostat. The conjunctiva being seized below, and about two lines from the cornea, with a small pair of serrated pinchers, held in the left hand, he was thus enabled to carry the globe of the eye downwards, and thereby contract its movements. Then taking a proper instrument, (such as Dentists use in cleansing teeth,) in his right hand, he placed it flat on the lower and external border of the incrustation, thus acting from below upwards. The false membrane which covered the cornea offered no resistance, and the central *plaque* was readily detached in one entire piece. This operation, executed with great care, had the most happy success. The patient, who for three years had lost the use of that eye, who believed vision completely destroyed, and had suffered beyond measure, saw now as well with this, as with the sound eye. M. Cunier received several communications from his patient after his return to England, and was assured that the cure remained complete. Since that time, (March 1842,) M. Cunier has had frequent opportunities of removing incrustations from the cornea. In nineteen cases, the collyria used by the patients, were composed of a salt of lead, or of zinc, or of copper, either with or without, the addition of opium.

M. Cunier has then rendered a real service to ophthalmic surgery, by pointing out the dangers and inconvenience of using these kinds of collyria, in the treatment of ulcerations of the cornea. It is therefore apparent that the preparations of opium, combined with these metallic solutions may produce those incrustations, of which M. Cunier is the first to speak, and to which he has directed the attention of the oculist.—*Annales d'Occulist*, as quoted in *Bull. Gen. de Therap.*; 1844.

Cure for Nævi by Croton Oil.—M. Lafarque states his method of curing Nævi, by inoculating with croton oil, as follows: Five or six

punctures should be made on and around the tumour, with a lancet dipped in the oil, just as in vaccination.

Each of the punctures causes immediately a pimple, which in thirty-six hours is developed into a little boil. These boils unite and form a red, hot, painful tumour, covered with white crusts, and resembling a small carbuncle. Two days afterwards the scabs separate, and in lieu of the nævus is seen an ulcer, which is to be treated on general principles. It would be dangerous to make more than six punctures on a very young infant, as the irritation and fever are considerable.—*Prov. Med. Jour.*

The Liquor Potassæ—Given in doses of from 15 to 30 drops, three times a day, is an admirable remedy in many cases of inveterate skin disease. According to our observations, it is far more efficacious, and perhaps, too, less injurious, than the potash in combination with iodine. The liquor potassæ may be given in milk, beer, decoction of sarsaparilla, &c. With respect to the sulphate of iron as an external application, in sycosis, mentagra, &c., we cannot believe that it possesses any curative virtues above those of the sulphate of zinc, or of the sulphate of copper, that are in daily use. The white vitriol is our favorite; and the best way of applying it is by dipping rags of soft linen in a tepid solution of the salt, and covering these with a piece of oil-skin. If used thus, the lotion will not require renewal oftener than night and morning. In some cases, a little hydrocyanic acid may be conveniently added to the solution with advantage.—*Med. Chir. Review.*

Extirpation of the Lachrymal Gland for the cure of Fistula Lachrymalis. By M. PAUL BERNARD. (*Revue Medicale.*)—Some time ago M. Bernard communicated to the Academy of Sciences a case of cure of *fistula lachrymalis* by means of the extirpation of the lachrymal gland. This gland had only been previously extirpated on account of cancer; and the simplicity of the operation, as well as the rapidity of the cure, induced him to remove it for fistula. A man, 30 years of age, subject to a considerable discharge of tears from the left eye, but without fistula, had been subjected to most of the usual remedies for the cure of that disease. The canula, collyria, and ointments of various kinds, had been employed for a period of ten years, but the watering of the eye still continued, and rendered the vision very confused. M. Bernard then determined to remove at least that part of the gland which appeared to be hypertrophied. A vertical fold of the skin on the outer edge of the eye was raised, and a bistoury pushed through it. This exposed the palpebral edge of the gland. This portion was found to be hypertrophied; it was drawn out by the forceps, and removed. The orbital portion of the gland also. No bad results followed: the wound healed rapidly; the watering of the eye disappeared; in fact, a perfect cure followed.—(*From Edinburgh Med. and Surg. Journal, Jan. 1845.*)

Cases of Premature Delivery. By M. SENLEN. (*L'Experience*, 30th May, 1844.)—M. Senlen has excited labour prematurely 13 times in 7 women, in consequence of deformed pelvis. In three of these the deformity was produced by rickets; in 4 by malacosteon. Of the 13 labours in these 7 women, only 7 children were born alive, and 4 of these died very shortly after birth. The antero-posterior diameter of the pelvis in these women was 2 inches in one, 2½ in another, 2¾ in another, and in the rest less than 3 inches. Labour was induced by puncturing the membranes, and, according to the contraction of the pelvis, was brought on from the 29th to the 38th week of pregnancy. The average period, however, was on the completion of the 30th week, or 7 calendar months.

METEOROLOGICAL OBSERVATIONS, for January, 1845, at Augusta, Ga.

Latitude 33° 27' north—Longitude 4° 32' west. W.

S.R.	Ther.	Bar.	Wind.	S.R.	Ther.	Bar.	Wind.
	3 P. M.				3 P. M.		
1 48	72	30 inches	N. W. fair.	17 56	68	29.6-10 in.	S. rain.
2 41	63	29.9-10	S. E. fair.	18 58	57	29.7-10	N. W. fair.
3 40	64	"	S. W. cl'dy.	19 35	37	29.9-10	N. E. rain.
4 43	70	"	" fair.	20 36	42	"	N. E. misty.
5 43	71	"	" "	21 38	55	"	W. fair.
6 57	64	29.3-10	S. E. rain.	22 29	58	30	N. W. "
7 56	56	29.5-10	W. fair.	23 42	50	29.9-10	E. rain.
8 38	60	29.8-10	" "	24 49	56	29.6-10	W. cl'dy.
9 32	62	29.9-10	" "	25 32	54	29.7-10	N. W. fair.
10 33	68	"	S. W. "	26 31	58	29.8-10	W. "
11 42	58	29.7-10	W. "	27 31	67	29.7-10	S. "
12 39	55	29.8-10	N. W. "	28 31	68	29.8-10	S. E. "
13 30	61	29.6-10	S. W. "	29 37	58	30	N. W. "
14 38	60	29.9-10	W. "	30 32	53	30.9-10	" "
15 36	59	30	variable.	31 26	59	30	" "
16 39	70	29.9-10	S. E. cl'dy.				

22 Fair days. Quantity of Rain 4.3-10 inches.

At the annual examination of the Medical Institution of Yale College, held on the 15th January, eleven candidates were admitted to the degree of Doctor of Medicine.

ERRATA.—In Dr. MEANS's communication on the subject of Calomel, on page 98, line 9th from bottom, for "(Chloride)" read Chlorine.

" 102, " 14th from top, for "purgatives" read purgation.

" 103, " 8th " " for "so far I know" read so far as I know.

" 105, a whole line after the 5th from top omitted—insert as follows: "which unite vigorously in the fibrin Albumen, &c."—then follows next line, "either in solids," &c.

page 105, line 8th from bottom, for "Miller" read Müller.

" 112, " 23d from top, for "while" read whole.

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NEW SERIES.—APRIL, 1845.

[No. 4.

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Notice of the Memoirs of M. de Haldat upon the Mechanism of Vision. By JOHN M. B. HARDEN, M. D., of *Liberty County, Georgia.*

The object of the present communication is to bring before the readers of this journal the recent researches of M. DE HALDAT upon the Mechanism of Vision, with reference more particularly to the adaptive power of the eye. These researches, it appears, were originally embraced in three separate memoirs read at different times before the Academy of Nancy, and published among its transactions; but a complete *analysis* of them has been furnished by the author for the September number of the *Annales de Chimie et de Physique*, from which we have condensed the following account:—

It is well known that, for the purposes of distinct vision, several nice adjustments in the structure of the eye are necessary in order to correct those *aberrations* which are dependent upon the laws of refraction and the properties of light. The modes of correction for *spherical* and *chromatic* aberrations, we believe, are universally agreed upon by philosophers: the former arising from the structure of the crystalline lens by which its density increases from the circumference to the centre—the latter from the “adjustment of the powers of the different refracting media of which the globe of the eye is composed, so as to give rise to what is called an *achromatic combination*.” The correction for parallaxic aberration, however, or the

adaptive power of the eye by which it maintains the same focal distance for rays from different directions, has given rise to *much controversy* and has been made the subject of long and laborious investigation by **OLBERS, PORTERFIELD, HUNTER, HOME, YOUNG, (1)** and others.

The theory which seems to have received most support is that which refers it to *muscular action*; but there has been, and still continues to be, great want of unanimity in regard to the *mode* in which this *action* effects its object. Some have supposed that the contraction of the muscles compressed the whole globe, and thus increased the convexity of the cornea; while at the same time the axis was elongated and the retina removed farther from the lens:—others have referred it to a change in the convexity of the lens itself, or a motion effected in it by the action of the ciliary body, or ligamenta ciliaria, by which its distance from the retina was either increased or diminished. This last seems to have been the opinion of Dr. YOUNG.

The chief arguments in support of these views have been—first, the vague and unsatisfactory one derived *ex necessitate rei*, and believed to be *good and true, because sufficient to explain the phenomenon*—the second, from the sensation of effort and fatigue of which we are conscious when we attempt to adapt the eye to the vision of near objects. To this last our author replies, that “it is by no means certain that this sensation of fatigue has its seat in the muscles, but should rather be ascribed to the state of the retina, fatigued by an abnormal impression!” To the idea of any change in the form of the cornea, he opposes—first, “the almost *absolute incompressibility* of the humors of the eye, and the *extreme tenacity* of the membranes which contain them—secondly, the difference of opinion among authors, some of whom attribute *this power* to the recti, others to the oblique, while a third class refers it to the combined action of all—thirdly, whether we admit the combined action of all these muscles, or the separate action of each set, it is necessary to prove that they can, by their contraction, change the form of the cornea; a power which cannot be admitted because of their unfavorable disposition, and particularly when we consider that the recti muscles, which are most powerful on account of their mode of insertion, cannot effect this change without *exerting* upon the posterior hemisphere a *pressure* which requires a *point of support*, (*point d'appui*.) or resistance which we cannot

(1) Although denied by Dr. YOUNG, our author follows ERBER in believing the eye to be perfectly *achromatic*.

find either in the flexibility of the optic nerve, or in the extreme softness of the fat which occupies the pyramidal interval which separates the recti muscles or which fills the base of the socket. As to the oblique muscles, which can only act in producing the rotation of the globe around the antero-posterior axis, we cannot see how they can effect the compression necessary to produce the result supposed."

But even supposing the muscular arrangement ever so favorable for the purpose, our author finds in the size of the muscles an insuperable objection to the admission of a power in them sufficient to change the convexity of the cornea. By an experiment made upon the eye of a sheep, he found that a power sufficient to produce the least change in this membrane must be equal in pressure to three kilogrammes,* whereas, judging of the strength of a muscle by its mass, a rule adopted by all physiologists, the power of the muscles of the eye cannot exceed 500 grammes.

Another strong argument against any change in the form of the cornea, is found in a fact accidentally observed by the author, viz: that when the globe of the eye is subjected to a pressure sufficient to effect a change in its form, the cornea becomes *translucid*, assuming a bluish gray tint, *entirely incompatible with distinctness of vision*.—"Hence," says he, "it is evident that the hypothesis of compensation by a change in this membrane cannot be sustained."

Not satisfied, however, by these indirect arguments, the author next proceeds to *direct experiment upon the point*, and, in the manner of Dr. Young, measures with great accuracy the *curvature* of the cornea, while the eye receives rays from different directions. For this purpose he uses a small micrometer telescope having a magnifying power of thirty diameters. The experiment may be conducted in two ways: In the first, the eye is examined in profile, and the visible part of the cornea is brought to the focus of the object so as to obtain a distinct image. The wires of the micrometer are then so applied as that one will be a tangent to its convexity, and the other will pass through the two extremities of the visible crescent, and thus its form can be satisfactorily determined while the person fixes his eye upon objects at different distances. In the second, the glass is directed obliquely towards the cornea, and receives the image of any external object reflected by it. This image being brought between the wires of the *micrometer* is accurately measured, while the

* Kilogramme, a 1000 grammes. A gramme, 20 grains.

person is directed to fix his eye intently upon an object by exerting all the force of the muscles. The constancy in form of the cornea was conclusively shown by the fact, that the *reflected image* always preserved *the same dimensions*, and thus the experiment, according to our author, "*completely deprives the cornea of the claim to the function of a compensating instrument which has, for so long a time, been gratuitously ascribed to it.*"

Having satisfied himself upon this point, our author next seeks in the other structures of the eye the instrument of this compensation. The aqueous humor being as unalterable in its form as the cornea itself, cannot be supposed to have any agency in it. The iris, whose chief use seems to be to apportion the quantity of light to the wants of the organ, cannot be any better adapted to perform a part so important. The vitreous humor, when separated from the crystalline, forms no distinct image upon the *retina*, and therefore we are forced to ascribe it to this latter, which unites all the properties of artificial lenses by which images are formed in our *instruments*. But having determined this fact, the question recurs—what is the *mechanism* by which the eye adapts itself to objects at different distances? In determining this, the author again has recourse to the *experimental method*. The crystalline of an ox, fresh and sound in every part, was fixed by a suitable instrument in a camera obscura, and exposed to the rays of the sun, which were kept in a horizontal position by a heliostat—the image of the sun, formed at the focus, was received upon rough glass, and was of course produced by parallel rays—the direction of the rays was then changed by the interposition of convex and concave glasses, and yet the image constantly retained its *integrity*, although altered somewhat in *extent* and *brilliancy*, proving that *the crystalline lens has the property in itself, within certain limits, of forming at the same focus constant images for rays from different directions.*

The author has performed this experiment a great many times, both by himself and in the presence of those well acquainted with *optics*, and *always with the same result*. He has also varied the experiment by using the *entire eye*, with the exception of a small portion of the posterior hemisphere of a circular form, which he removes for the purpose of receiving the image which would have been formed upon the retina. This portion is replaced by a watch-glass, which is fitted into an instrument composed of a double hemispherical capsule, large enough, when united, to contain the globe of the eye of a sheep

or ox. Each capsule is perforated with a hole in the centre, one of which contains the watch-glass above mentioned, and is to be applied to the posterior part of the eye—the other to the cornea. They are brought together by means of a hinge, which unites the branches to which they are attached, and may be opened or shut at pleasure; when closed they leave an open belt or zone, surrounding the middle of the eye, where the globe may be compressed by the ends of the fingers.

From all the experiments performed by the author, he thinks himself warranted in drawing the following conclusions:—"1st. That all the possible changes in form which the cornea may undergo, do not give it that influence in the formation of the image which has been ascribed to it—since we may, by means of pressure upon the globe, swell it out, or diminish its natural tension, by removing a portion of the aqueous humor, or, what is still more remarkable, remove the whole cornea without destroying or even modifying the image. 2ndly. That we may replace the aqueous humor with atmospheric air, by means of a narrow oblique puncture; showing that the use of the fluid is simply to give to the cornea that peculiar form which is natural to it. 3rdly. That the crystalline is the instrument essential to the formation of the image—since its removal, all the other parts being sound, renders it impossible, and, on the contrary, it takes place when, the crystalline remaining, we remove the cornea and the aqueous humor, and even when *isolated*, the focus remaining constant for rays from different directions. 4thly. That the crystalline, nevertheless, cannot alone form the image upon the retina, without the aid of the vitreous humor, *because* the focal distance of the crystalline is too short, as is proven by a comparison of its focal distance with that of the focal distance of the two fluids combined."

The property of uniting into one focus rays from different directions, then, recognized in the *crystalline*, the only remaining question to be solved, is in regard to the *cause* of a phenomenon so remarkable and apparently so much at variance with the laws of optics. The author acknowledges the difficulty; but observes that, even supposing we cannot explain it, we must still admit the fact, as we are obliged to do in a great number of cases where phenomena are equally well known, whose causes are entirely hidden from our view. The conclusion at which our author arrives, however, is that it must result from the form and intimate structure of the lens, and is probably connected with that arrangement by which we know the aberration

of sphericity is corrected. There is one fact in relation to this structure brought to view by the author, which he seems to think may have an important bearing upon the point, which is, that the elementary lamina, of which the lens is composed, gradually change their lenticular or ellipsoidal form as they approach the centre, until at last they assume the globular form completely, so that the nucleus is a perfect sphere.

The theory of our author recommends itself, not only on account of the stable basis on which it seems to be founded, but because of its agreement with that simplicity in the operations of nature by which she accomplishes many objects by the action of one of her laws. Thus, as an illustration, by a modified *motion* of the earth, no less than four important phenomena are produced, all of which, at last, may be referred to the one law of *universal gravitation*—and other instances of the same kind might be adduced. Another argument, not noticed by the author, which appears to us strongly in favor of his view, is found in the *structure* of the eyes of some of the lower orders of animals, as for instance, the insect tribe, where the eye is so immovably fixed in the socket that the adaptive power which they possess must depend upon the physical structure of the refractory media *alone*, and not on any muscular power which they can have in modifying their forms.

Like every other theory, however, which may be advanced, it is by no means free from objections, two of which readily occur to our mind. The first is, that although the nearest distance, at which distinct vision is possible to the eye in a normal state, is about six inches, yet by looking through a pinhole made in paper, we may distinctly see an object at less than *half that distance*. Now, as the pinhole can act in no other way than by excluding light like the iris, it seems to indicate that the iris may have something to do with this property of the eye, as has been maintained by some writers. Again, it does not appear that the removal of the lens entirely destroys the adaptive power of the eye, although it certainly *diminishes it to a very great extent*. It was a practice pursued and recommended by Sir WILLIAM ADAMS, for what he calls "*Conical Cornea*," to extract the lens entirely, and in the cases in which he performed the experiment, the result was, as he himself declares, "that although the patients were unable to see either near or distant objects, immediately after the operation, without glasses, yet after a time they acquire a power to a considerable degree of perfection, if they have

the patience to do without them;" and he gives us several cases illustrative of the fact, so that after all this faculty may be connected with more than one *structure* of the eye.

Our author has, it is true, adopted the *inductive method* in his researches upon this subject, but the truth or falsity of his deductions must rest upon the correctness of his *premises*. The inductive method is *good for nothing*, without *good observers* and *good observations*. Lord VERULAM himself, in his Essay upon the Nature of Caloric, for the purpose of illustrating his own doctrine, associated together, as concordant examples, *the solar rays* and aromatic herbs; (1) and many a fine spun theory and logical argument have been based upon admissions equally groundless and *untenable*.

January 31st, 1845.

(1) No wonder he came to the conclusion that, "Calor est motus expansionis, cohibetus, et nitens per partes minores"—although really it is about as good a definition as our modern philosophers can give.—Nov. Organ. Lib. 2, p. 164.

ARTICLE II.

Mesmerism—A Lecture delivered in the Medical College of Georgia, (by request of the Students,) Feb. 18th, 1845. By PAUL F. EVE, M. D., Prof. of Surgery.

The subject, Gentlemen, proposed for me to examine at this meeting, is Mesmerism, or Animal Magnetism. In the course of lectures on Surgery, which it has been my duty to deliver before you this winter, and which is now drawing near to a close, I took occasion to allude to it, incidently, once or twice. When recommending the means employed to prevent or relieve pain during the performance of surgical operations, you will recollect this supposed agent was not included among them. An operation having been performed by one of the professors of this college, upon a patient in the "mesmeric state," without evincing consciousness or pain, it was natural for

you to desire to know why I had excluded it from the therapeutical applications in Surgery.

In yielding to your solicitation, to give the reason of the faith that is in me, and to present the evidence upon which I rely for an opinion on this subject, I do it with some reluctance. It is known, that as a faculty, the professors do not agree, and probably it is well we should not, upon a topic such as this. As an associate, like them, I am an humble searcher after truth, and this generally is best discovered by mutual and amicable discussion. And though we may differ, still there is no apprehension of the well known harmony and good feelings which exist among us, being in the least disturbed by this investigation of an intricate and mysterious agency. In examining the subject, I hope to do so as a medical philosopher, to offend none who may not share my own opinions, to violate in no instance propriety or courtesy; and all I ask, is a fair hearing and an impartial judgment.

No one at the present day can enter upon the *terra incognita* of animal magnetism, without some hesitation. The man who would give a decided opinion upon this subject, must expect to encounter opposition, and should be prepared to fortify his position not only with good reasons and sound arguments, but by indisputable facts—a point however much desired, not yet attained. The vantage ground is evidently that of silence or non-commitment, but however difficult and arduous the duty, and whatever of reputation or character it may involve, I cannot now shrink from attempting to discharge it.

In discussing the subject, I propose to endeavor to establish the three following propositions, viz :

1st, That Mesmerism, or animal magnetism, was unanimously condemned by the commission appointed in 1784, by the king of France, to examine and report upon it; and that it has never received any favor or approbation from any scientific or learned society whatever.

2d, That Mesmerism is not a reality; but that the phenomena ascribed to it, are justly due to the imagination and excited feelings.

3d, That the non-expression of pain, is no proof of its non-existence, and that there are conditions of the body and mind, in which no suffering is evinced, and moreover that this state of the system is independent of Mesmerism.

First, then, I am to prove that the commission appointed in France in 1784, unanimously condemned Mesmerism; and that it has received no favor since from any scientific society. The first part of

this proposition, one would suppose, would require no exposition ; but I have recently heard it denied, and this too by men of influence, that the French commissioners who examined Mesmerism near the close of the last century, did report unfavorably to it.

My second proposition, that Mesmerism is not a reality, and that the phenomena ascribed to it, are justly due to the imagination, is so intimately connected with the first, that they will be considered together and not under separate divisions.

It is said to be as difficult to define Mesmerism, or animal magnetism, as it is to believe the phenomena ascribed to it ; and it has been observed by the same authority, that it differs from common magnetism as much as natural phenomena do from supernatural. It is not even decided whether it be a psychological or physiological subject, whether it belongs to the clerical or medical profession. And if doctors have differed respecting it, so have divines ; for while, one* has published a sermon "on the Satanic agency of Mesmerism," another has recently, in England, issued a pamphlet entitled, "Mesmerism the Gift of God."

Some believers have pretended to trace the history of Mesmerism to the remotest antiquity. Indeed, the miracles of Moses and those performed by our Saviour, have all been explained by reference to this agent, by some of the followers of MESMER, in France. The holding up of the hands of the patriarch, when Joshua contended against the Amalekites, and the imposition of the hands of Christ upon the sick on some occasions, say they, were acts of Mesmerism. But it is generally admitted, that animal magnetism took its origin about the middle of the last century, and somewhat after the following manner :—PARACELSUS, VAN HELMONT, and others, having investigated the singular properties of the magnet, it soon became famous as a curative means. A certain Jesuit, named HELL, after curing himself of rheumatism, as he supposed, by this agent, excited the ardent imagination of MESMER, then residing in Vienna. MESMER took his degree in that city in 1776, and wrote a thesis on the influence of the planets on the human body. According to his theory, all the phenomena of life depend upon the movements of a magnetic fluid ; and by publicly maintaining this opinion he incurred the contempt and ridicule of his own countrymen, which induced him,

*The celebrated Rev. Mr. NEILE, of Liverpool.

with other considerations, to quit Vienna and come to Paris. Having created a great sensation in this latter capital and acquired an immense fortune, the king, Louis XVI. ordered in 1784, a commission from the Academy of Sciences, from the Faculty of Medicine, and the Royal Society of Medicine, to examine and report upon this new agent employed by MESMER in curing diseases. From these three scientific bodies, fourteen persons were appointed, and among the number from the Academy, were FRANKLIN, BAILLY and LAVOISIER, names inseparable from the annals of science. MESMER refused to submit to this commission, and declined all propositions to have the subject investigated. They then had recourse to his acknowledged disciple, M. D'ESLON, who was a member of the Medical Faculty of Paris, and was one of the first converts to the new doctrine.

Every week, for two or three hours, these commissioners experimented with ESLON, or DESLON, as his name is anglicised, and by themselves. M. VIREY, a believer in Mesmerism, as any one may see in the 29th vol. of the *Dictionnaire des Sciences Médicales*, states, that they felt nothing of this secret agent—they could not recognize the slightest sensation. Children did not experience any thing singular when experimented upon. When they bandaged the eyes of a patient, and then persuaded him he had been magnetized, but without doing it, he exhibited the same impressions as those who had been subjected to it. As trees were also magnetized according to MESMER and DESLON, they bandaged the eyes of a young man, and conducted him towards one non-magnetized; upon telling him it was magnetized, he was agitated by magnetic convulsions. All these effects then, ascribed to a secret pretended agent, they concluded were the result of the imagination; and the commission from these learned bodies reported that animal magnetism was a chimera, and that the magnetic cures were the effects of the imagination. This report was confirmed by every member of the commission, except one, M. JUSSIEU, who did admit that there were some facts which induced him to believe in the existence of a particular fluid, which he compared to electricity rather than to magnetism. He was however, but one, out of fourteen.

J. BOUILLIAUD, a skeptic on the subject, and at present one of the Professors of Medicine in Paris, writes concerning this same report, that the commissioners acknowledged that those who pretended to Mesmerize patients had great control over them. But this com-

mission, of which the celebrated and unfortunate BAILLY was the reporter, concluded, from the experiments which they witnessed and from those they made themselves—1st, that there existed no particular fluid which deserved the name of magnetic fluid—2d, that the facts obtained were the result of a bewildered (*frappée*) imagination; since from their experiments, they obtained these magnetic effects without magnetizing, provided the patients *believed* they had been magnetized, and that on the other hand, these effects did not occur when the patients were magnetized without their suspecting it—and 3d, that the *crisis* produced in the magnetic treatment might be dangerous and never useful.

In the article, somnambulism and animal magnetism, written by Dr. J. C. PRICHARD, of Edinburgh, in the 20th part of the *Cyclopædia of Practical Medicine*, just published, will be found the following observations respecting this celebrated report of the learned societies of Paris: "The commissioners were men of the highest authority in science. * * * They saw trees, bottles, glasses and cups magnetized. 'We cannot prevent ourselves,' say they 'from recognising in these constant effects a powerful agent, which acts upon patients, subdues them, and of which the person who magnetizes them seems to be the depository.' The commissioners soon discovered that it was very difficult to ascertain to what point the results produced were the *effects* of the *imagination*, to the excitement of which *so many circumstances were adapted*, and how far to any peculiar agency. They resorted to private trials of the same manipulations. Some of the most interesting of these experiments were performed at Passy, at the residence of Dr. FRANKLIN, who could not be present at Paris at the public exhibition. Here DESLON tried his art in vain upon the obdurate American, as well as upon the members of his family, who, notwithstanding that some of them were ladies in delicate health, were found quite insensible to the whole ceremonial of magnetism. Neither of the other commissioners could perceive any effect in his own person." Dr. P. then relates the experiment upon trees said to be magnetized, with a boy having his eyes bandaged. This youth was purposely selected by DESLON, as an individual susceptible of the magnetic influence. This gentleman stood in the garden, with his cane pointed to the magnetized tree to keep it so, while the boy approached four trees successively. Under the first, he perspired great drops, coughed, expectorated, and felt pain in his head—being then 27 feet from the magnetized tree. Under the se-

cond he felt stupor, &c.; under the third, these symptoms greatly increased; the youth believing he was approaching the magnetized tree, though in reality distant 38 feet from it. Under the fourth, not magnetized, but 24 feet from the tree pointed at, he fell into a crisis. "He lost all *consciousness*, was carried to a neighbouring grass-plot, where DESLON soon reanimated him. The operator accounted for this untoward phenomenon by saying that the trees had probably become spontaneously magnetic. 'But, rejoined the commissioners, if trees are in the dangerous habit of assuming this state of their own accord, a susceptible person walking in a garden must incur the continual risk of falling into a crisis.'

"The commissioners," continues Dr. PRICHARD, "having repeated and varied the experiments in every way that seemed to afford an opportunity of arriving at the truth, at length came to the conclusion that the whole proceedings of the magnetizers were calculated in several ways to do injury; that they were devoid of any salutary or useful influence, and that the results *were wholly to be attributed to the imagination and other feelings, which were excited by the performances*. M. JUSSIEU, however, refused to coincide in the report, and returned one of his own, which, though by *no means favorable to Mesmer*, and explaining most of the results in the same manner as M. BAILLY had done, yet admitted that in four particular experiments, he could not account for the results by attributing them to the imagination. He proposed an hypothesis of his own, viz. that animal heat, or, as he termed it, 'the electric fluid animalized,' directed and accumulated on certain parts, may be the cause of the effects produced."

It is proper to state, that in addition to this report, a private one was sent by these commissioners to the king, referring to the liability of abuse on the subject of Mesmerism. And indeed one would suppose something of the kind was necessary even thus early, as the following anecdote, known to all Paris at the time, will explain: "Un satyriasis survint subitement à un monsieur, à la vue d'une jeune demoiselle qui était avec sa mère; les choses allaient si loin, que la mère se leva pour y mettre ordre; mais M. d'Eslon s'écria; Laissez les faire ou ils mourront." To say nothing of this gross violation of decency and morality, we have here certainly a striking instance of sympathy on the part of the mesmeriser for the sensual acts of the mesmerised.

You have now, gentlemen, the conclusions of this famous report of

the Royal commission of France, made in 1784, and in the very words of three different persons under different circumstances, viz : by VIREY, a believer in Mesmerism ; BOUILLIAUD, a skeptic ; and PRICHARD, who may be considered neither the one nor the other. If what has been stated respecting the decisions made by the scientific Societies of Paris be true—and that it is correct no one will pretend to deny—we find, in the first place, that MESMER acted the part of all quacks and impostors, by refusing to have his pretended magnetic fluid examined by those most competent to judge of its virtues, and therefore, if true, to give it character ; and, secondly, that after a patient investigation of the subject of Mesmerism, varying and repeating experiments in every possible way which promised to arrive at truth, by fourteen individuals selected for the purpose from three of as learned bodies as then existed in the world, they pronounced animal magnetism a chimera. Not one made a report favorable to MESMER, and only one, M. JUSSIEU, refused to admit that the operations of the imagination could explain all they had seen. He classed all the phenomena which he had observed under the four heads :—1st. those general facts of which physiology could indicate the true cause with precision ; 2nd. negative or facts contrary to animal magnetism ; 3rd. those attributed to the imagination ; and, 4th. facts which induced him to admit the existence of a particular fluid. He then states the case of a blind woman who was agitated when a rod, leading from a tub, which could neither generate nor retain magnetism or electricity, was pointed at her stomach, and which ceased when said rod was turned aside. VIREY remarks, that JUSSIEU did not say whether the blind person was prejudiced in favor of animal magnetism or not, for this idea is often every thing in these delicate observations. Several other facts, continues he, analogous to this one, (viz. the agitation of a blind woman when her stomach was pointed at with an iron rod,) induced JUSSIEU to presume that there really did escape from the human body, under certain circumstances, a fluid, which he compared to that of electricity, rather than to a magnetic fluid, *not yet demonstrated*.

From this slender pretext, the impression is made that one of the members of the French commission was in favor of Mesmerism ; and, moreover, that he was one of some four or five commissioners appointed by the King of France ; whereas, the truth is, not one believed that animal magnetism had been demonstrated, and there were not less than fourteen individuals who were associated in the

investigation of the subject, and not from one, but from three different Societies. Notwithstanding these facts, strange as it may appear, some believers in Mesmerism are in the habit of referring to this very report, as authority for their faith; because, say they, the commissioners acknowledged constant and powerful effects upon patients, the agency of which seemed to be deposited with those who had magnetized them. I have detected, however, that the word *seem*, was very apt to be omitted; and the quotation itself not completed. The commissioners expressly state, that this agent acting upon these patients was none other than the imagination. They never thought of attributing these effects to Mesmerism. They declared, unanimously, they had never felt it—that it had not been demonstrated to them: they condemned MESMER *in toto*.

Now what were these effects which this commission witnessed, and which they, with so much unanimity, attributed to the imagination and other feelings excited by the performance of the magnetizers? Precisely those that are credited at the present day. Besides coughing, pains, tremors, convulsions, involuntary movements, &c. &c.—they say that every thing depended upon the will of the magnetizer; were the patients in an apparently deep sleep, his voice, a look, a sign, drew them out of it. They also saw a young man, very impressible by the magnetic influence, who not only coughed, expectorated, perspired great drops of sweat, felt pain in his head, had stupor, fell into a crisis, and *lost all consciousness*, and simply because he believed he was approaching a tree said to be magnetized. Having lost all consciousness, of course this youth was insensible to pain. A similar state, unconsciousness and insensibility to pain, is now produced by a look, or a few passes with the hands, for some seconds, or at most, a few minutes. In the former case, a FRANKLIN, a BAILLY, a LAVOISIER, a GUILLOTIN, a JUSSIEU, and others of the highest authority in Science, attributed it wholly to the imagination and other feelings excited; and as to the latter instance, Gentlemen, while others may differ, I really do not think we can do better, than follow their illustrious example—two effects, so similar, cannot be very remote in the cause producing them.

We now leave this report, of which so much of late has been said, and allow believers in Mesmerism to draw what consolation or encouragement they can from these undeniable and indisputable facts, for so far as its conclusions are concerned, I have, in all honesty and candor, given you the truth, the whole truth, and nothing but the truth.

In 1831, the subject of Mesmerism was agitated in the Royal Academy of Medicine in Paris, and M. HUSSON made a very favorable report respecting it—even admitting its extensive influence; but which was ably criticised by M. DUBOIS, (D'Amiens). This, however, had nothing to do with the Academy of Sciences, or Faculty of Medicine, in that city: and even the report of M. HUSSON was not adopted by the Royal Academy of Medicine, but simply read to that body.

In 1841, appeared a work entitled the *Academic History of Animal Magnetism*, and written by Drs. BURBIN and DUBOIS, members of the Royal Academy of Medicine of Paris. "These authors," says Dr. JAMES JOHNSON, the celebrated Reviewer, "endeavor to establish a connection between all the leading juggleries which from one age to another have made their appearance in the world. They carry the reader, without any forced transition, from the oracles of antiquity to the witchcraft of the middle ages, from the devotees of London to the tremblers of Cevennes, from the convulsionists of St. Medard to the exorcisms of Gassner, and lastly to Mesmerism, which the true believers point to us as the era of the doctrine of animal magnetism." They moreover declare that the report of M. HUSSON, already referred to, was neither discussed nor approved of by their learned Society.

The only other instance that I know of since 1784, in which animal magnetism was alluded to in the Academy of Sciences, the most learned body in the world, occurred the 24th of June, 1841. It was contained in a report read by the distinguished physiologist, M. MAGENDIE, on a case of alleged cure of a deaf and dumb woman, made by M. DUPOTET. As the exact condition of this patient, a female, was not ascertained before being subjected to this supposed agent, the commission could not vouch for the cure, even had it been complete—"but unfortunately for both patient and doctor, it was far from being so." They took three inmates of one of the deaf and dumb institutions of Paris, and proposed to M. DUPOTET to test the efficacy of his treatment; to this he consented. He asked for only eight days; they gave him fifteen. At the end of the eighth day M. D. represented them as cured, but the regular physician of the Institution from which they were obtained, told the commissioners that the amendment was in no respect different from what might at any time be affected, by proper exercise, &c., of the organs of hearing, but which continues for a short time. They then proposed to M.

DUPOTET to send the three patients three times a week to his own house, to complete the promised cure, but he declined giving any answer. The commission therefore concluded, the cure alleged to have been effected by animal magnetism on a deaf and dumb patient, is quite without foundation.

Dr. JOHNSON says that at a subsequent meeting of the Academy of Sciences, they resolved by a *large majority* to have nothing more to do with the subject of Mesmerism. M. CLOQUET, and even M. BOUILLIAUD, objecting to this summary dismissal of it, when M. BESCHET stated that as that body had come to a resolution to proceed to the order of the day, whenever the question of the quadrature of the circle or perpetual motion was brought forward, the subject of animal magnetism should be dealt with by them in the same way. This I believe was the final action of that most distinguished Society on the subject of Mesmerism.

On Sunday, the 1st April, 1829, M. JULES CLOQUET, one of the Professors of Surgery in Paris, removed a cancerous breast from a patient, in that city, while in what is called the mesmeric state. She was a pious lady, of excellent character. She evinced no pain during the operation—indeed the *Hermès*, a journal of animal magnetism, states that when the surgeon was washing the wound, the patient said merrily, “come, leave off—don’t tickle me.” She died a fortnight after the operation; and a report having reached England, that while dying she confessed the whole had been a cheat, Dr. ELLIOTSON, who was ejected from a professorship in the London University, for his belief in animal magnetism, wrote to CLOQUET on the subject, and who replied, (so says Dr. ELLIOTSON’s student in Paris,) he “is quite certain she never made the confession alluded to.”

On the 22d November, 1843, the subject of Mesmerism was introduced into the Royal Medico-Chirurgical Society of London, by Counsellor TOPHAM, relating the case of an amputation of the thigh of a laboring man, who was in the mesmeric condition. Lawyer T. was backed by Dr. ELLIOTSON, and in the account published of it by the latter gentleman, it is stated that “soon after the second incision, a moaning was heard from the patient, which continued at intervals until the conclusion; giving to all present the impression of a disturbed dream. When the patient awoke, gradually and calmly,—at first, he uttered no exclamation; and for some moment seemed lost and bewildered, but after looking around, he exclaimed, ‘I bless the Lord, to find it’s all over.’ When questioned, he observ-

ed, he felt no pain, but once 'felt as if he heard a kind of *crunching*.' As all in the mesmeric state are poetical, this last expression has been interpreted to mean, he heard the sawing of the bone. But the proof that this man knew what was going on at the time, the operator, a Mr. WARD, stated he designedly pinched the sciatic nerve with a pair of forceps; and had the patient been even decapitated, Dr. MARSHALL HALL says his opposite limb would have been agitated—a fact which you, Gentlemen, saw illustrated a few days ago, in the partial amputation of a foot.* Dr. HALL concludes from this circumstance, that the quiescence of the man during the operation was the effort of his mind to control his suffering. In the discussion which ensued on the presentation of this case to the Royal Medico-Chirurgical Society, we find that besides Dr. ELLIOTSON, Drs. ARNOT, OLIVER and SYMES, were the advocates of Mesmerism, and those who opposed it were JAMES JOHNSON, MARSHALL HALL, MOORE, BLAKE, GEORGE BURROWS, COPLAND, GREGORY, EVANS, MERRIMAN, Sir BENJAMIN BRODIE, ALCOCK, TRAVERS, LISTON, WAKLEY, Editor of the *Lancet*, CÆSAR HAWKINS, &c. It need scarce be added, that animal magnetism was peremptorily dismissed from the Society.

In the two patients operated upon in the Mesmeric state, the one recently in this city, and the other in Europe, we notice this difference. The one, when roused, and after collecting himself, said, "I bless the Lord to find that it is all over;" but the other, after she awaked, conversed concerning her amputated breast, "about a quarter of an hour," replied, when asked, that "it feels about as it has done for some time back," and this, too, notwithstanding the Mesmeriser's passes over the seat of the operation, in order to lessen its sensibility, and yet "she expressed her incredulity—said the operator was jesting, as it was impossible that it could have been done without her knowing it at the time, or feeling any thing of it *now*. She became convinced only on carrying her hand to the part and finding that the breast was no longer there." This surely is the most astounding part of the whole operation. That she was insensible to the knife is certainly nothing compared to the fact, that after being aroused from the "Mesmeric state," and saying distinctly when

* I know Dr. E. has attempted to deny this reflexed action in the opposite limb; but the profession need only be reminded of the fact, that the uniform practice, until a few years ago, was to tie the opposite limb to a leg of the table, to prevent this very movement or agitation, during amputation.

questioned too, that the breast felt about as it had done for *some time* back, admitted she did not perceive any change in the ordinary sensation of the affected breast, conversed about it for fifteen minutes, and still did not know the operation had been performed. With me this is the greater wonder of the two, and is proof positive of the extent to which this patient was deceived by her own sensations. She declared she felt no Mesmeric influence in the breast, notwithstanding the passes had been applied, by a Mesmeriser; and then again while in possession of her natural feeling in the breast, did not know for about fifteen minutes it had been cut off, even after having been aroused from the Mesmeric state. If this be not proof of the effects of the imagination, or of the operations of the mind, in this instance, controlling the ordinary sensations, then I know not where we can find it. This lady was evidently in a trance, or reverie, brought on by the workings of her own feelings—just like the boy who lost all consciousness, from believing he was approaching a tree said to be Mesmerised. And yet this one case, has made hundreds of believers to Mesmerism.

Who does not recollect the incident of an actor on the stage of Liverpool, falling dead upon uttering the words, in the play of the *Stranger*, "There is another and a better world?" To what was this melancholy and unexpected event owing, but the yielding to the impulse and energy of his own feelings? How often have hysterics, syncope, &c., been brought on by patients themselves?

But not only by learned societies has Mesmerism been invariably rejected, it has almost universally met the same fate from distinguished men in every country. With a few exceptions, such as CUVIER, ROSTAN, HUSSON, BERTRAND, &c., in France; HUFELAND, in Prussia; ELLIOTSON, in England, &c., animal magnetism has uniformly received but little favor from scientific persons.

RENAULDIN, says, "as to Mesmerism, animal magnetism, somnambulism, real or simulated, or Perkinism and other modern inventions of charlatantry and of bad faith, if in some cases, these means, equally disavowed by reason and experience, have appeared to give some favorable influence to pain, it is evidently in individuals who have a blind confidence or a credulity without limit, and disposed by prejudice to receive an alleviation desired with ardor."

We have already given the names of several distinguished men of Great Britain, and no doubt the list could be greatly augmented. To it we add the name of Sir ASTLEY COOPER. And if in the British

realm there be one man who stands, more deservedly higher in character, as a physician and a writer, it is Dr. JAMES JOHNSON, of the Medico-Chirurgical Review, and who has on every suitable occasion been the uncompromising and unremitting opponent of Mesmerism.*

BRACHET, a distinguished author in Paris, who has published largely on nervous affections, &c. writes, "from the magnetism of MESMER has arisen that other jugglery, denominated animal magnetism. *Twenty times beaten down by science, and reason and facts*, every now and then it has again lifted up its head, more ridiculous and amusing, indeed, than dangerous. We do not, however, mean to deny the effects which may be induced in persons of highly nervous constitutions, by the passes and other grimaces that are usually practiced. In the magnetic stupor of the animal energies that is sometimes induced, the entire nervous system is compromised; and this influence may unquestionably appease pain and spasmodic contractions for a time, by acting powerfully on the *imagination*." He then states that although he has heard of such cases, he has not himself met with any well-authenticated examples. "These distant voyages," continues M. BRACHET, "without moving from off one's chair, these divinations, these transpositions of the senses, &c., are only so many clever tricks, contrived to amuse the weak and entrap the foolish. It may happen that a poor silly hypochondriac, who is strongly prepossessed in favor of this culpable jugglery, appears for

* Take but his last blow at this subject, and which is the last article in the last No. (99) of the London Medico-Chirurgical Review. Ridiculous I know is not argument, and neither are opinions, facts. I give this in proof of great men, in the medical profession, being opposed to Mesmerism. Let it pass for what it is worth.

"*Mesmerism*.—We do not know whether to congratulate, or condole with, the talented Heroine of Political Economy on the strange dream that has come over her soul. It appears that Miss Martineau recovered her health and—we were nearly saying—lost her senses! But this is not the case—she has acquired an additional sense—CLAIRVOYANCE! Her maid, BETTY, placed her hand on her mistress's ivory forehead, and, presto, a STEAM-TUG that was passing, became metamorphosed into a ship of celestial glory, fringed with gold and silver, and fit to be 'a God-head's dwelling.'

It's all in my eye, BETTY MARTIN—EAU.

Betty, however, is no fool. She prescribed ale and brandy and water to her mistress, instead of opium eating, and the change resulted in the best effect. Harriet's Mesmeric dreams will prove a god-send to the animal magnetizers, and will command more attention among the old women of both sexes than her Political Economy and her 'Preventive Checks.' But it won't do!

"It will be the wonder of the day—perhaps of nine days—and then sink into oblivion with the exploits of Miss Okey."

a time to derive some benefit to his health; but then it is only from his becoming the dupe of his credulous fancy, and not from any direct or actual sanative influence bestowed."

In concluding the above translation from the French, Dr. JONSON says, that "we observe, in a recent number of the Medical Gazette, (a Journal of Paris,) a quotation to the same effect, of the opinions of the celebrated Müller, of Berlin, on the subject of animal magnetism. How long will any men of education allow themselves to be imposed upon by the juggling tricks of clever rogues, and paid-for testimony of credulous women? Medical men, at all events, should know better; for they must have studied the history of the nervous system and its functions only indifferently well, not to be aware that many startling, and not easily explicable, phenomena are apt to occur during the progress of some of the neuroses."*

It is frequently asked, and with an air of triumph, by believers in Mesmerism, will you deny facts? No, Gentlemen, these are said to be stubborn things, and we do not wish to run counter to them. But what we do deny is, that all are not facts which are represented to be such, and this Mesmerists must admit themselves. Ask any one why he believes in animal magnetism, and he will tell you, because I have seen so many facts I cannot doubt its existence. Request of this same person an explanation of the phenomena he has witnessed on this subject, and he will reply, I have observed so few facts I can give none. That is, he has facts enough for his senses

* BENJAMIN FRANKLIN'S ESTIMATE OF ANIMAL MAGNETISM.—Franklin writes thus, to M. De La Condamine:

"You desire my sentiments concerning the cures performed by Camus and Mesmer. I think, in general, maladies caused by obstructions, may be treated by electricity with advantage. As to the Animal Magnetism, so much talked of, I must doubt its existence till I can see or feel some effect of it. None of the cures said to be performed by it have fallen under my observation, and there being so many disorders which cure themselves, and such a disposition in mankind to deceive themselves and one another, on these occasions, and living long, has given me so frequent opportunities of seeing certain remedies cried up as curing every thing, and yet soon after laid aside as useless, I cannot but fear that the expectation of great advantage from this new method of treating diseases will prove a delusion. That delusion may, however, in some cases be of use while it lasts. There are in every great, rich city, a number of persons who are never in health, because they are fond of medicines, and always taking them, whereby they derange the natural functions, and hurt their constitution. If these people can be persuaded to forbear these doings, in expectation of being cured by only the physician's finger, or an iron rod pointing at them, they may possibly find good effects, though they mistake the cause.

"I have the honor to be, &c.

B. FRANKLIN."

(*Dublin Med. Press, July 21st, 1841.*)

to admit a thing, but not enough for him to exercise his reason. Now, upon what sense can we rely? Is it not true that courts of justice are chiefly sustained by errors of sight and hearing, and that perverted sensation and imaginary diseases feed and clothe the medical profession? How often has even lithotomy been performed where no stone existed?

Another question often proposed by Mesmerists is, will you doubt your senses? If I receive an impression, by the exercise of one sense only, and this act be contradicted by reason and judgment, then I should not credit it, because I know how liable one sense is to deceive me. But if by the question so often asked, is meant the senses, then, I answer, no, I do not (in general) doubt them. And upon this very principle, I cannot believe in Mesmerism; for it has never been presented to my mind through the senses. Like the commissioners appointed by the King of France, I have never been able to perceive any effects in my own person or in that of another, which could not be otherwise explained. I have tried until satisfied that nothing unnatural could be produced. I have had professed magnetizers to labor by the hour on patients, and on some too very anxious to be put into the Mesmeric state, and still no relief or mitigation of pain whatever was induced before the knife was employed. Some indeed have gone to sleep, but a word or prick of a pin has sufficed to arouse them. And I know and have heard of patient after patient, where all the ceremonials of animal magnetism have been industriously employed, without producing the expected effects. Nor have the promise of my Mesmerising friends been at all realized. True, I witnessed on one occasion what produced extacies in some of them, until the Mesmerised boy by indication exhibited the organ of *combateness*, from touching the tips of his shoulders. I have been asked several times since if I would like to witness the Mesmeric phenomena, and I have replied that I was a searcher after truth on the subject. I have heard, and that too very recently, of Mesmeric soirées or parties, at which I am told some of you were actors, as well as spectators, but as I was not invited, it is presumed the experiments were not satisfactory. Perhaps, indeed, my skepticism might have made me an unwelcome visitor. But this much is due to truth.

But still you may ask me, shall I not believe my senses? Certainly, my professional brother, you are the best judge of your own perceptions. And pray, let me ask, what have you experienced on this subject? Have you even recognized it by any four, or three,

eye, even two of the senses? If so, I beseech you relieve the world of the anxiety on the subject—settle the question at once of its existence, by telling what it is. But can animal magnetism abide this test? If not, and there are still difficulties in the way, mysteries and contradictory evidence, yet unexplained, it is the part of wisdom to scrutinize more closely and delay a decision favorable to its existence. In proportion to the improbability of a thing, should be our skepticism. The more extraordinary the phenomena, the more irreconcilable the fact, the greater the liability to error. VOLTAIRE says, to believe a miracle, (and what is the conversion of water into wine compared to some of the so-called facts of Mesmerism,) it is not sufficient to have seen it, for we may be deceived. To be well established, it ought to be performed in the Academy of Sciences of Paris, or in the Royal Society of London. Now it has so happened that both these learned and scientific bodies, as we have already observed, did publicly and with great unanimity condemn Mesmerism.

In accounting for the facts ascribed to animal magnetism, and in presenting my views on this subject, I adopt the opinions of J. BOUILLAUD, and reduce all phenomena that we observed to two classes or orders; 1st, disturbed sleep, gaping, convulsive movements, deep sleep, somnambulism with insensibility more or less marked, shortings, laughters, &c. These, says he, do not depend upon Mesmerism, since it is known that all these can be manifested by individuals who have not been subjected to that influence, and are the effects either of certain lesions of the nervous system, or simply the influence of certain impressions or moral feelings. The second order of phenomena, continues he, cannot be classed with facts admitted at the present day—they are entirely contradictory to physiological truths the most evident and clearly demonstrated—these are sight without the eyes, at the epigastrium, the end of the fingers, the occiput, the forehead; prophecy; divination; determining the seat and treatment of diseases by those, who have never studied medicine; the communication of thoughts without any kind of sign; the immediate communication of symptoms of patients to the magnetized with which they are in relation; &c., &c. As these violate and are at variance to known and long established principles of anatomy and physiology, and are opposed by reason and judgment, and since it is not agreed what exactly they are by those who admit them, and moreover as this evidence is so conflicting as to destroy itself, they should be rejected as having no scientific value. If then the facts of the first class are explained

independent of Mesmerism, and those of the second are inexplicable by it, why, I ask, employ the term at all? Why presume the existence of a thing never demonstrated? Why declare the presence of a new agent, when those known to the profession can explain all the facts that are well established; and besides, to admit it, would necessarily involve the performance of miracles?

It may be said that all my arguments are chiefly directed against the name, and not to the denial of the existence of certain phenomena attributed to animal magnetism. I do admit that sleep, convulsive movements, insensibility, even mania itself, yea, death, may be produced, and have been produced, by one person operating on the feelings of another—but these, in my humble opinion, are not the effects of an occult mysterious agent, called Mesmerism, but the legitimate results of the imagination, &c. And I am particularly strengthened in this opinion, by M. BERTRAND, one of the most zealous advocates of animal magnetism at the present day, in Paris; and also by Dr. PRICHARD, of Edinburgh, who has written the last article on the subject now before the profession in this country: and again, by Dr. J. K. MITCHELL, one of the professors in the Jefferson Medical College in Philadelphia, whose views in its favor have been published, and so far as I know, he is the first and only one who has ventured in this country to do so.

Dr. PRICHARD defines a somnambulator to be a dreamer who is able to act his dreams. "To this property," says Dr. MITCHELL, "of artificial dreaming, may be referred the alleged miracles of clairvoyance, intuition, and prevision. The subject dreams that he sees, and the questioner is deceived, by his confidence, his plausibility, and his ordinary character. He knows him to be honest, and he does not perceive that he is himself led astray by his uncorrected *imagination*. * * * The *rapport*, relation, or communication, supposed to have an absolute existence, dependent on the Mesmeric fluid, seems to be *entirely voluntary* on the part of the patient, and rests on his knowledge of its supposed necessity. It is, therefore, a *delusion*, but one of the greatest convenience to the public exhibitors of Mesmeric wonders. * * * Many of the feats of the clairvoyants are the results of the sharpened hearing, which enables them to detect objects by the sounds they make. They really believe they see them, and so does the exhibitor, although he aids them by handling audibly the various objects. (Certainly very flattering.) Thus he opens and shuts a pencil, a pen-knife, or a spectacle-case, and rubs a stick, or a sheet of

paste-board. He always makes as much noise as possible with every thing, and he generally asks the producer of a marked card to explain the word or device to him. As we cannot believe in Mesmeric rapport, so we are not able to credit the existence of any peculiar sympathy between the operator and subject. Untrained or ignorant patients never show sympathetic phenomena. I have been pinched, and hurt otherwise, a great many times, without observing any suffering on the part of my subjects, until they were taught to believe that such a relation existed; and then they honestly felt hurt, as people do in dreams—a kind of imaginary suffering. The phrenological phenomena of Mesmerism, when rigidly examined, are found to consist, as do most of the Mesmeric wonders, of 'such stuff as dreams are made of.' The excitement of the brain is general, the direction of that excitement is given by the Mesmerised person's knowledge of phrenology. * * Most of the phenomena of Mesmerism are a strange mixture of physical impulse and *mental hallucination*." These are the words and language of the most distinguished believer of Mesmerism in our own country.

With respect to the rapport, communication, or sympathy claimed to exist between the Mesmeriser and the Mesmerised, there is one remarkable circumstance, that has been overlooked. The person magnetized, it is said, experiences all the sensations, &c. with the one with whom he may be placed in relation; and he will feel pain, taste the same articles, imitate the act of swallowing, &c.; indeed, be in subjection even to the will of the Mesmeriser, and yet they never utter the same words. If this relationship be so intimate, this sympathy so close, why is it that they do not speak alike—if one does what even the other only wills, thus having in reality an identity of thought and actions, why don't they use the same language.

To prove too what can be endured by practice, the Boston Medical and Surgical Journal states, that within a year two boys voluntarily called to explain the tricks and impositions of Magnetizers—one had been several months the wonder and admiration of hundreds of believers. "Yet he positively declared that he had never been asleep in any instance, before an audience, nor was there ever a period when he was not thoroughly conscious in every respect, and obedient to command. By practice, he could bear to be pricked under the nails, tolerate the blaze of a candle within an inch of the eye without recoiling, allow heavy men to stand on his toes, &c., and in short, became by regular process of training, the best subject in New-England."

But farther is proof of the effects ascribed to animal magnetism, being nothing more than the operations of the mind upon the body, all acknowledge its phenomena resembling very closely those of somnambulism—now it is certain, that the somnambulist sees only those objects which he seeks, or which are present to his imagination. A case of a female in this state is mentioned by SAUVAGES, where a lighted candle brought so near to the organ of vision as even to burn the hair of her eye-brows, a person unseen uttering suddenly a loud cry into her ear, brandy and a solution of ammoniacal salt placed under her eyes and introduced into her mouth, the feather of a pen, and afterwards the extremity of a finger applied on the cornea, Spanish snuff blown into the nostrils, pricking by pins, twisting her fingers; all these means were tried without producing the least sign of feeling or perception, and yet she perceived objects to which the *current of her thoughts* directed her.

We have the authority of the celebrated commissioners appointed in France in 1784, to report on the subject of Mesmerism—they unanimously agreed that almost every fact they witnessed, was the result of the imagination and other feelings, to the excitement of which so many circumstances were adapted. "BERTRAND maintains that the effects, as well as all the results of magnetism, are to be attributed solely to the excited imagination; and he declares that the effects produced within his experience have always borne the most exact proportion to the conviction of the patient." He also supposes that the sense of weariness or numbness of the limbs, which persons experience when experimented upon, is occasioned by remaining long in one position.

The theory of animal magnetism adopted by ROSTAN, HUSON and others, and practiced upon by all believers, is that there exists a peculiar fluid in the human system which can be set in operation by certain movements, or looks, or even by the will of the Mesmeriser. This, says Dr. PRICHARD, soars so far above the region of observation and experiment, that it cannot be subjected to proof, and even were it conceded, or established, would not account for the phenomena of which the explanation is sought. "A much more probable opinion," says he, "is that of M. BERTRAND, who, after surveying with calmness and discrimination the whole history of magnetism, and witnessing with his own eyes the proceedings of the operators in this art, and practicing them himself with considerable effect, comes at last to the conclusion that all the results of these operations

are brought about through the influence of the mind; not by the will of the magnetizer, radiating forth his own vital spirit, and operating through this material, or immaterial instrument, on the vital spirits of other men, who are the passive recipients, but by the energy with which the feeling and *imagination* of the latter act upon themselves.

Abbé Faria boasted that he had put more than 5000 persons into the Mesmeric state, simply by placing them in an arm-chair, and after telling them to shut their eyes and collect themselves, suddenly pronounced, in a strong voice and imperative tone, the word, "dormez," sleep. BERTRAND says that though this may be an exaggeration, he very often succeeded by this method—even upon a considerable number of persons, *removed from all suspicion of co-nivance*. Here then is the imagination alone producing all the effects ascribed to animal magnetism, not in one case only, *but in 5000 instances*. What more can be required to prove my proposition—that Mesmerism is not a reality, but its effects are due to the imagination—than to cite you 5000 cases of the Mesmeric state, induced by placing these patients in an easy position, and crying out, sleep. "We have here a cause proved to be sufficient for the phenomena with which it is more philosophical to rest satisfied, than to resort to the visionary hypothesis of the magnetic fluid radiated forth by the will of the operator upon surrounding persons and objects, or to confess the strange doctrine, that the volition of a human body is capable of exerting an immediate influence on other minds and bodies than his own." The co-operation of the agency of the will on the part of the magnetizer is even denied by BERTRAND, "who declares that in trials made by himself precisely the same results followed, whether he *willed* to produce them or not, provided that the patient was inwardly persuaded that the whole ritual was duly observed."

If animal magnetism be true, and Mesmerism a reality, where are the principles deduced from the facts observed even to the present day? The whole world has been engaged for 60 or 70 years collecting facts from any and every source, down to the present day, and yet not one established law—not one uniform rule exists, by which we may examine the subject, or by the exercise of which we can with any degree of certainty produce a given phenomenon. We have invariable principles for electricity, galvanism, magnetism itself—yes, for all other sciences, but not one for Mesmerism. In the selection too, of subjects upon whom to display its powers, animal magnetism invariably prefers the nervous female or delicate persons,

those especially in whom the imagination is most lively and active; while on the other hand, no man of science has yet been able to feel its influence. What the commissioners appointed by the King of France said more than 60 years ago, in reference to the fact, that not one of them could be made to experience the effects of Mesmerism, has descended to all other men of learning—none have yet been influenced or affected by it.

If the imagination have nothing to do with the production of the results ascribed to animal magnetism, we should have thought ere this to have witnessed these upon the inferior animals. Operations are occasionally performed on the horse, cow, dog, &c.; their organization is similar to ours, and we claim for them, the sympathizing benevolence of our Mesmerising friends. Give us a series of operations upon the inferior animals in the Mesmeric state, and our opinion is at once overthrown. Or if this be asking too much, then pray cite us the surgeon who has performed a series of operations even upon the human species while in this condition. But what is the fact on this point, a distinguished Professor of Surgery in Paris operates in one case, (Cloquet, 1819,) and for 16 years in succession, no second one is presented to him. Here we have an excellent, benevolent man, as all who know him will acknowledge, a believer in Mesmerism, or rather who was, who is in the daily habit of operating, both in private and in the hospital, possesses, as is supposed by some, the means of relieving pain, and yet for 16 years he has not found another instance in which it could be applied. And still Mesmerism, this *non est inventus* for years together, is dignified with the name of Science. Can any one, I candidly ask, believe that, under these circumstances, animal magnetism even has an existence, without admitting, it only displays its influence by exceptions to general laws; and so do catalepsy, somnambulism, mental hallucination. And yet in this very city, I have known an operation made conditional in reference to the induction of the Mesmeric state, and that too upon a patient laboring under a cancerous mamma. We have thus a new science attempted to be built up, upon exceptions to generally received and well established principles—for instance, that the knife gives pain in surgical operations. But with all the zeal and industry with which it is now cultivated and attempted to be applied in every case, with one or two exceptions only, can patients be thrown into the insensible state—they will violate the Mesmeric condition by flinching when stuck with a pin.

Lastly: If Mesmerism be true, apply to it the test by which we have decided the existence of a specific virus in hydrophobia. Give us instances of its effects upon infants in the cradle. Exhibit the Mesmeric state in the child before it exercises its imagination. I insist upon this test, and not in one, but in a series of cases.

I am persuaded that Mesmerism has been alone continued to the present day, and believed to have an existence, from the circumstance of its supposed connection with the nervous influence, which itself has not been and cannot be defined. There are things in medicine, as well as in other sciences, which have not been demonstrated, and yet admitted to exist. Miasm or malaria is assigned as the cause of a large class of diseases, and still it has not been discovered. The effects, fever, &c., are however, uniform and almost invariable, so that no one doubts the existence of a cause, although undefined. But this cannot be said of animal magnetism. Its phenomena are far from being certain, but on the contrary are exceedingly irregular and undetermined, and are moreover explained even by believers themselves, as well as by men of the highest scientific authority, to be dependent upon another cause—viz. the imagination. Perkinsism, *c. i.* the cure of diseases by metallic tractors, which was only a branch of Mesmerism and founded upon its supposed existence, was at once exploded by Dr. HAYGARTH employing wooden tractors painted in imitation of metal, notwithstanding the wonders it was accomplishing both in this country and in England. Its sole effect was thus proven to be wholly attributable to the imagination. This, no doubt, will be the result of any treatment or system based upon the supposed existence of the agency under consideration. Mesmerism can neither be demonstrated nor abide the test of experience.

My third and last proposition is, that the non-expression of pain is no proof of its non-existence, and that there are conditions of the body and mind, in which no suffering is evinced, and moreover that this state of the system exists independent of Mesmerism. That many capital operations have been performed without the patient's complaining, we have abundant testimony in the record of our profession. We are convinced that there are few surgeons who have not met with such instances. I have seen several.

Who need be reminded that a stoical philosophy once taught that it was beneath the dignity of man to complain; that pain was not an evil; that to cry was a shameful pusillanimity? Who requires

to be told that savages, criminals and martyrs, have not only endured the greatest tortures without uttering a groan, but welcomed the horrors of death itself? Who does not know that at this moment there are religious fanatics in the East, whose bodies are voluntarily and cheerfully sacrificed to false gods—who have their persons suspended in the air by great hooks stuck in their backs, &c.

Although pain is designed by nature to protect and preserve life, still, a contented mind, the consolations of religion, a profound meditation, delirium, fanaticism, mania, &c., can suspend the action of our senses, and thus prevent the perception of pain. The mind at times has such control over the body, as even to extinguish life. At the siege of Bude, during the war of Ferdinand I. against the Turks, there was a young man who fought with such heroic valor, that he excited the admiration of both sides. At last he fell overpowered by numbers. He was sought out among the dead that he might be recognized; on removing his mask *RAISCIAT DE SOUABE* observed it was his son, he fixed his eyes intently upon him, and fell dead, without uttering a word. History furnishes us several such instances. The influence of the mind may be exerted only over a part of the body. *ROBERT BOYLE* relates the case of a woman who, seated near a canal, saw her infant fall into the water and drown—from that moment she was attacked with paralysis of one of her arms, which attended her to the grave.

The savages on the West coast of North America had long pieces of a broken bottle stuck deep into the soles of their feet, without paying the least attention to the circumstance; and when spoken to on the subject by the European sailors, they immediately cut their bodies with the fragments of the glass.

ALBUCAVIS relates that on one occasion, he refused to amputate a hand from dread of hemorrhage, when the patient himself performed the operation. Count *MANSFIELD* submitted to amputation at the sound of the trumpets playing a charge. The daughter of Henry of Albert, for a splendid present promised by her father, gave birth to Henry the IV. of France, while singing a song. When *MARSHALL DE MUY* was cut for stone, he uttered not a word or a groan.

Baron *PERRY* states that he removed a cancerous breast from a patient, who smiled and spoke tranquilly to a cross she held in her hand. At another time he operated upon a young man for aneurism, which was complicated and very painful, who remained silent with an imperturbable calmness, as if the surgeon were operating upon another person. He assisted also in a case of lithotomy upon a pa-

tient of sixty, wherein the operation was long, and accompanied with hemorrhage, and although he was advised by his surgeon to cry out when he suffered, he replied by saying the thing was not worth the trouble—he appeared scarcely to suffer.

Surgeon ALCOCK says, "I recollect a sailor astonishing Sir A. COOPER by not uttering the faintest sound while his leg was taken off, * *. No one will doubt the high courage of the Marquess of Anglesey. While his leg was amputated (at Waterloo) he uttered not a sound."

Mr. TRAVERS relates the case of a man, whose mind was unimpaired, but whose hands up to the wrist, and feet half way up the leg, were perfectly insensible to any species of injury, or cutting, pinching, scratching or burning. He passed a large needle into the ball of the thumb, down to the bone. Not the least degree of pain, or even of sensation, was produced.

Mr. LISTON describes a case in the *Edinburgh Medical and Surgical Journal* for April, 1829, of a gentleman, who lost his sense of touch over nearly the whole surface of the body, and when Mr. L. cut away one of the bones of his foot, he felt no pain whatever, and he added, "nor would I now, I am convinced, were you to dissect the whole foot."

Mr. ARNOTT says he has seen operations performed, without the knowledge of the patient, when insensible through opium or great loss of blood.

Dr. COPLAND states that he had taken off, or seen taken off, a leg from a man who gave no sign of pain.

Sir R. DOBSON relates, that when the late Sir THOMAS THOMPSON lost his leg in action, it is well known that he was singing during the time the operation was being performed. In the burial ground of Greenwich Hospital, continues he, is a monument to a seaman who was wounded at Trafalgar; the epitaph relates that, "while the amputation was performing, he was exultingly singing the patriotic song of Rule Britannia." Another seaman in this hospital, while loosing his leg, said to the surgeon, "avast a-bit while I take a pinch of snuff;" coolly took the box out of his pocket, and after having offered a pinch to the assistant surgeon, took one himself, and the operation was finished without his having uttered a groan.

Several surgeons had attempted to remove a small tumour from the eye-brow of a lady in London, but the moment the scalpel touched the tumour, the patient would scream out with pain. WARDROP bled

her to fainting, and extracted the tumour, which she would not believe until a glass was presented her to see her face. She too was deceived.

The celebrated, but unfortunate, Gen. MOREAU, when wounded near Dresden, hesitated at first to have his limbs amputated; but having made up his mind to submit, called for a segar, and while smoking, had both thighs cut off.

Mr. CLEVER cut himself for stone, a few years ago in Paris.

In November, 1832, Prof. GIBSON, aided by Drs. HOKNER and BARTON, of Philadelphia, removed a large tumour from the neck of a boy 17 years old. It was for a fungus hæmatodes. The first incision was seven inches long—one nerve had to be divided, the internal jugular tied; and another nerve, the par vagum dissected for five inches. "The operation lasted 34 minutes, and was most painful and difficult. He (the patient) *remained during the whole operation motionless, and neither complained, sighed nor groaned.*" (See 6th Edition, Gibson's Surgery.)

It is even said the late Sir THOMAS HARDY of the British navy, was altogether insensible to pain.

In the American Journal of Medical Sciences for April, 1844, I related the case of a gentleman operated upon in Charleston for stone in the bladder, by my friend Dr. OGIER of that city. It is there stated that "he refused to be tied, and insisted upon it, that he would be able to remain perfectly quiet during the operation. He was told of the danger to which the least motion would expose him. *During the whole operation he remained as motionless as a dead subject.* Dr. O. in a note at the bottom of the page says, he was not Mesmerised.

CURLING gives the case of a youth who performed self-castration—"he said he was not conscious of any pain in the operation."

Two winters ago I operated upon an Irishman in our hospital, for a bloody tumour in the scrotum. At the first and only incision made, he called out, "cut away doctor, cut away."

In June, 1842, I trepanned a man for a spicula of bone irritating the brain. The operation was necessarily tedious, lasting near three quarters of an hour. Towards the close of it, I had to insist upon the patient checking his laughter, and to cease joking about the silver plate to be put over the hole made in the cranium.

But why multiply examples of this kind, to exhibit the effects of the mind over the body, so as to induce insensibility to surgical operations. These few, hastily collected, will suffice.

The work assigned me, Gentlemen, is now before you, and you have

my views of Mesmerism. To what extent they are correct, is for you to judge, and future days to decide. I may have done the subject injustice, as I know I have made a very feeble and imperfect defence of the opinions of those whose side I advocate; but I have acted conscientiously. And if by the explanations I have offered you, conflicting testimony can be reconciled, and you put into the right path to investigate this mysterious, all-absorbing topic of the day, your Lecturer has his reward. It will be perceived, I teach no new doctrine; but those do, who reject the opinion of the imagination being the source of the phenomena of animal magnetism.

I know not how this subject is viewed by you, but with me, the existence or non-existence of Mesmerism, is a vital, a fundamental question. If true, you and I may close our books and retire forever from these walls, for by it, and through it, *omniscience* is come. Would you be wise in medicine—be put in relation with JOHNSON and VELPEAU, and your object is accomplished. Would you operate without inflicting pain; would you know what remedies are now employed in London, Paris, or China; would you inspect the actual condition of the internal organs; would you predict the return of disease; would you tell whether that lady is pregnant with a boy or a girl; or would you deliver this lady without pain—Mesmerism being true, study it. But, fellow-laborer in the science of medicine, these things are not so; and I tell you whom you should rather consult—the Author of all things. To the law and the testimony, what say they—intuition! in the sweat of thy brow shalt thou eat bread—divination! thou knowest not what a day may bring forth—no pain, no suffering! in sorrow shalt thou bring forth children.

That which was unanimously condemned by men of the highest scientific authority when it originated—that which is now classed with the quadrature of the circle and perpetual motion, by the Academy of Sciences in Paris—that which was abruptly dismissed from the Medico-Chirurgical Society of London—that which is ridiculed by every Medical Journal of the day—that which has never been demonstrated, but which is opposed by reason and judgment—that which has never received favor with but few exceptions from scientific men, of any age or country—that the belief of which cost Dr. ELLIOTSON his professorship in the University of London—that which at best exists but in a dreamy state—that which is explained not in one, but in thousands of cases, to be due to the imagination alone, cannot be, is not true.

PART II.—REVIEWS AND EXTRACTS.

ARTICLE III.

Dublin Journal of Medical Science, No. LXVII.

The January number of this valuable periodical contains its usual variety of interesting matter. The first article is the history of "a case of loss of Speech, &c.—by William Edward Steele, A. B., M. D., &c." The patient was a man aged about 25 years, and engaged in a laborious situation in a government office. The attack was preceded by apoplectic symptoms, and paralysis of the right limbs. Under appropriate treatment, "he soon improved in all respects save in his power of speech, which, with the exception of an occasional word or short sentence, was obliterated." Dr. S. relates many of the observations which were made during the progress of the case, for the purpose of determining the true nature of the mental disease. His conclusions we subjoin.

"These facts, I conceive, warrant us in making the following deductions: 1st. That there exists a faculty of the mind which presides over the expression of thought, by speech, writing, and gesture. 2ndly. That in the expression of our thoughts, by these several means, there exists a considerable difference in their perfection and complexity, as communicating media; this difference being in the order enumerated:—speech, writing, gesture. 3rdly. That admitting these conclusions, it is highly probable that the defects exhibited in these actions, as a result of disease, arise not from any fault of memory, considered in itself, especially as in other respects the memory is perfect; but that this may appear to be impaired by the destruction of one of the means it possesses, of manifesting its existence, in common with its other mental attributes, perception, retention, and association; these being thus placed in the same position as is the retina in cataract or opaque cornea,—the power of sight remaining, but the means, by which its existence is manifested, destroyed.

"As to the probable situation of the cerebral lesion, in cases of this description, our knowledge is imperfect. Dr. Osborne believes it to be the upper surface of the cerebrum. In Abercrombie, cases of brain disease are related, accompanied by loss of speech, in which the central parts of the brain were those chiefly affected. In this case, however, if it be true, as laid down by modern craniologists,

that the double organ of language be seated at the back of the orbits, *both organs* must have been involved in disease, in order that the almost total loss of the power of expression may be accounted for. But the attendant hemiplegia would indicate the lesion to be situated in one hemisphere only, leaving, at least, one-half of the double organ of language untouched; a conclusion which is manifestly inconsistent with the total absence of the powers of speech, which this case at one time exhibited."

Mr. Donovan furnishes a long communication, "on the physical and medicinal qualities of the Cannabis Indica, or Indian Hemp; with observations on the best mode of administration, and cases illustrative of its powers." The remarkable effects produced by the Indian Hemp, and its value in the treatment of certain affections of an almost hopeless character, were first brought to the notice of the profession in an essay by Prof. O'Shaughnessy, of Calcutta. Mr. Donovan, who appears to have devoted considerable attention to the subject, seems quite enthusiastic in his opinion of its value—"I indulge," says he, "in the expectation that this powerful agent, when physicians have fully developed its properties, will rank in importance with Opium, Mercury, Antimony, and Bark."

It has been a question whether the Cannabis Indica and the Cannabis Sativa, or the common hemp, were the same species. The experiments of Mr. Donovan shew pretty conclusively, that they are distinct, and that the domestic hemp is destitute of the principle which renders the Indian plant so desirable an excitant to the voluptuous people of the East.

The symptoms produced by the action of this agent, differ in many respects from those which follow the use of other narcotics. Among the remarkable effects noticed by Prof. O'Shaughnessy in some cases, was a well marked cataleptic state. In almost every case hunger seems to have been excited. Mr. Donovan made some experiments with this article upon himself, for the relief of a neuralgic affection. We extract his history of its effects:

"Having determined to try Indian hemp, I swallowed, during one of these attacks, five drachms of the same tincture of the herb which in a dose of three drachms, had formerly proved powerless. In twenty minutes, I was agreeably surprised to find myself without pain; although for the last four hours I had suffered severely. There was this peculiarity of the relief obtained, that I walked without much consciousness of the motion of my legs, or indeed of having legs at all: I felt as if they did not belong to me.

"In some months after, while suffering under a severe attack of pain in the foot, I took nine grains of *weak* resinous extract of hemp, which had not the slightest effect. Next night, I took six drachms of the weak tincture of the herb, without the least benefit. The third night, being in exceedingly great torture, I took twelve grains of the same weak resinous extract: in twenty minutes I was nearly free from pain, went to bed, and slept soundly four hours. The pain then awoke me, but it was much less severe. In the morning, there was neither headach, nor any other inconvenience.

"Considerable pain having returned the fourth night, I took twelve grains of the same extract; soon fell asleep; and awoke, after two hours, free from pain. The fifth night, the pain being somewhat troublesome, and wishing more for experiment than through necessity, to try the effect of a larger dose, I took fourteen grains of the same resinous extract. About five o'clock in the morning, I awoke to encounter a most extraordinary scene,—one, of which words can give but a faint description. I felt a rush of strange sensations through my head, accompanied with a crackling and singing noise, and a vibratory motion through my whole body. These gradually subsided; and while dozing off, I thought an explosion took place in my head, followed by the same rushing noise and vibration as before, and afterwards by a strange metallic sound. Various other noises succeeded. My sense of touch and feeling had become more and more obtuse, until at length I lost all feeling, unless I pinched myself severely. The effects were now at their height, and the consequences were surprising. I absolutely lost the consciousness of having a body, and my corporeal existence appeared to be comprised within my head, and a small portion of my chest, near the throat; in these spots, I felt as much alive as ever, but all other parts were without feeling, and to my perceptions annihilated. My intellect was not in the least disturbed; memory was as good as ever; I reasoned well enough; was conscious of external objects as in perfect health: but I had some notion that if I gave way to sleep, I should never awake in this world; yet, strange to say, I felt perfectly resigned to this sudden termination of existence.

"These singular affections gradually passed off: on attempting to get out of bed, I could scarcely walk for giddiness; my stomach became sick, but on returning to bed I soon recovered, ate an immense breakfast, and remained perfectly well, without having experienced any of these inconveniences which succeed relief obtained from opium."

* * * * *

"The effect on the sensorium, produced by the medicine, is generally alarming to the patient as well as to the by-standers, unless they were previously made aware of what was to be expected. Some patients evince great terror of death, but on recovering from the fit of narcotism, they laugh at their fears, and are generally ready for another trial."

"Rumphius says, that the kind of mental excitement produced by hemp depends on the temperament of the consumer. Professor O'Shaughnessy represents the inebriation to be of the most cheerful kind, causing the person to sing and dance; and adds, that in persons of a quarrelsome disposition it occasions an exasperation of their natural tendency. The aphrodisiac effects of hemp have been insisted on by all the oriental writers: Rumphius doubts that the herb possesses any such power; for my own part I believe, that although it may powerfully excite Eastern voluptuaries, it has little effect on the natives of our own country; that when it does exert this influence, it is only on the young, and on those of a sanguine temperament. In all the instances of its exhibitions to male patients, recorded in the foregoing pages, one only was thus affected, and I made minute inquiry. In no case that fell under my observation, has it produced those rapturous ideas and ecstatic dreams described by the oriental writers. I knew but two or three whose ideas, while under its influence, were even pleasing, and some were singularly depressed, and under apprehension of immediate death."

The Indian hemp has been employed in the treatment of various diseases, principally, however, of such as are of a painful character. It has been used in both the acute and chronic forms of Rheumatism. Prof. O'Shaughnessy, as quoted by Mr. Donovan, says, "In several cases of acute and chronic rheumatism, admitted about this time, half-grain doses of the resin were given, with closely analogous effects,—alleviation of pain in most, remarkable increase of appetite in all, unequivocal aphrodisia, and great mental cheerfulness. In no one case did these effects proceed to delirium, nor was there any tendency to quarrelling. The disposition developed was uniform in all, and in none was headach or sickness of stomach, a sequel of the excitement."

The powers of the article in tetanus are truly remarkable. Mr. Donovan refers to a number of cases of this fatal malady which were treated with the Indian hemp, and in almost every instance with success. He also gives several cases of sciatica and other neuralgic affections, which were cured by this remedy. He declares that he has not made a selection of the successful cases out of many, but has faithfully recorded *all* which came under his observation, of which the termination was distinctly known.

The resin of the Indian hemp is the form in which the article has been most frequently employed. The tincture of the resin, of all the preparations of the plant, is said by Mr. Donovan to be the only one on which reliance can be placed.

"I say the *tincture*, because the resin itself, being totally insoluble in watery liquids, is best administered in the state of solution : in the pillular form, it is likely to pass undissolved through the intestinal tube. Mr. Richard O'Shaughnessy found that a drachm of tincture which was only equal to three grains of the resin, had a much more decided effect than five grains of the latter. The strength which I employ, and of which I have made a large quantity, to guard against the variability of new samples, is two grains to one drachm of rectified spirit. The source of the variation of strength alluded to, would be a softer or harder consistence of the resin employed, giving rise to an enormous and dangerous difference of power : other sources are the collection of the herb at an improper season : the decay of the herb by long keeping ; bad management of it in drying, &c.

"As to the modes of administration, I have tried many, and find the following to be the best :

℞ Tincturæ resinæ Cannabis Indicæ minim quindecim.

Spiritus Rectificati minima quadraginta et quinque.

Misce ; fiat haustus.

"The patient should be directed either to swallow the whole of this directly from the bottle to avoid loss, or to pour it into a little water, and *instantly* swallow it off. If not instantly, the resin will be precipitated, will adhere to the vessel, and thus escape being swallowed."

The Indian hemp is doubtless a most potent medicine, and is destined to prove a valuable acquisition to the *Materia Medica* ; but further observations are necessary, before we can arrive at any certainty touching its action and application to the treatment of disease. The interest which it has already excited will soon lead to ample experiment. In our *Periscope*, we publish the deductions of Dr. Laurie, drawn from his observations of its effects, and it will be seen that these are not so favorable as those of Mr. Donovan.

W. F. Montgomery, A. M., M. D., Professor of Midwifery, &c. to the King and Queen's College of Physicians, in Ireland, reports "a case of a large Cauliflower excrescence successfully removed, together with the portion of the Cervix Uteri, from which it grew." This case presents nothing novel in its features, with the exception of its favorable termination, which circumstance we presume led to its publication. Such operations have heretofore so uniformly been followed by a reappearance of the disease, and a subsequent fatal termination, that medical men generally despair of affording any permanent relief, and therefore attempt little more than a palliation of the more distressing symptoms. Prof. Montgomery's case

may serve to encourage efforts to effect a radical cure in such cases.

The patient was a woman of forty-five years of age, and the mother of nine children, the youngest of which was nearly four years of age. She had been complaining of her present symptoms ever since she had weaned this last child. On examination, a firm, rough, lobulated tumor, was found, nearly filling the vagina—it appeared to spring from the os uteri, as well as from the contiguous parts of the vagina, but the mouth of the womb could not be felt.

The tumor bled readily on being touched.

“By the speculum, the tumour was readily brought into view, and after wiping off its surface, a layer of coagulated blood with which it was covered, it appeared of a dull, dirty, whitish, or light drab color; its surface uneven and studded with a number of small tubercles, like the head of a cauliflower. This patient had been previously operated on in November, 1842, when the tumour then existing was removed by ligature, in doing which, portions of it were broken off, which afforded Dr. Anderson the opportunity of making the microscopical investigation into the structure of this fungus growth, already alluded to; but it soon grew again, and in the intervening four months had acquired considerable size.

“Saturday, March 4. I included the whole of the tumour in a ligature, which I placed as high up as possible; its application gave no pain, and very little discharge occurred. After applying the ligature, I drew it up one inch, and ordered the patient an opiate.

“The ligature was tightened every day, and in doing so was followed by sharp abdominal pain, without any accompanying tenderness, or acceleration of the pulse; indeed pressure over the pubes gave her so much relief, that she constantly kept her hand firmly pressed over that part. Anodyne fomentations with draughts containing acetum opii, relieved her pain; the pulse never rose above 80, and she was quite free, throughout, from any constitutional disturbance.

“On Sunday the 12th, I found that I could not draw the ligature any further, it had evidently come home to the top of the canula, and yet, neither it nor remains of tumour would come away; and being unwilling to allow the latter to remain any longer, I introduced a curved scissors, and removed the greater part of it.

“Thursday 16th. I exposed the upper part of the vagina by the speculum, and seized the remaining portion of the root of the tumour with a dressing forceps, when it came away completely, leaving the surface behind it clean and healthy-looking; it sprung from a space about the diameter of a halfpenny, engaging the margins of the os uteri, and the vaginal mucous membrane, towards the left side.

“On examining carefully the substance now brought away, I found that I had removed, not only the morbid growth, which was now reduced to a mere bundle of ragged filaments, but also the parts from

which it sprung, namely, the os uteri, and a portion of the vagina : —the bloody and serous discharges, and the peculiar abdominal pain, now ceased altogether, and a discharge of healthy pus took place from the exposed surface ; this, after a few days, threw up exuberant granulations, which I touched with nitrate of silver, and a clean and healthy cicatrization was completed in three weeks from the time of the removal of the parts. On the 7th April, she menstruated naturally, and on the 17th April I examined her with the finger and with the speculum, and found her free from any remains of the disease.

“I have since seen and examined this woman several times, the last occasion having been on this day (November 28th). She has menstruated regularly and fully during the whole interval of time, amounting now to nearly twenty-one months.

“Her general health is pretty good ; she is improved in aspect, and increased in flesh : she complains of nothing except some pain in her back, especially at the time of menstruation, which still continues regular.

“There is no projection of the cervix uteri into the vagina, and the os uteri has entirely lost the defined margins which are natural to that part in general : it is very much closed, and gives to the finger the feel of a small puckered cicatrix ; but all the parts are quite healthy and sound.”

Dr. Montgomery prefers the ligature for the removal of such tumors, and he states that the operation is more likely to be successful when the tumor has acquired a considerable volume, than when it is of a smaller size, because, though there may be more difficulty in passing the ligature, it can be placed higher up, and will more certainly retain its position. Moreover, from its greater volume, it is probable that the portion of the cervix uteri from which it springs will have become elongated, and will thus be more readily and completely brought under the action of the ligature. After the extirpation of the tumour, Dr. M. recommends, “that the surface from which it has been removed should be freely touched with some active caustic, such as the strong nitric acid, fluid nitrate of mercury, nitrate of mercury, nitrate of copper, or perhaps with the actual cautery, which, Dr. Johnson informs me, proved eminently useful in a case lately under his care.”

“Practical Observations on Phagedænic Ulceration, in connection with its primary and secondary forms,” is the title of an interesting article by John C. Egan, M. D., Licentiate of the Royal College of Surgeons in Ireland, and one of the Surgeons of the Westmoreland Lock Hospital. The term Phagedæna, has been differently employed

by authors. Dr. Egan bestows this appellation on "sores caused either by the process of ulceration or sloughing." As this species of disease is acquired by impure sexual intercourse, it has generally made some progress before medical aid is sought.

"It rarely happens that we are consulted by a patient having recently contracted such a sore, and on this account are not always able to state what was the first indication of the disease. If we inquire he will tell us it commenced either in a small black spot, resembling a grain of shot, or that a "pimple" was the first intimation of its existence; that it rapidly increased in size, without causing much uneasiness;* and that his fears were first excited by a bleeding which took place from its substance. When we come to examine it, we find the surface of a dark-ashy colour, to which a bloody matter tenaciously adheres; it neither exhibits granulations nor surrounding induration; the edges are irregular and undermined; the parts bordering on the ulceration are of a reddish hue; the smell extremely foetid; and at this stage it is generally attended with considerable pain. In the male, the part principally engaged is the glans penis, from which it afterwards extends to the prepuce; in the female, the external labia pudendi, in the first instance, from which it spreads with extreme rapidity; and if not quickly checked, involves in its ravages the vagina, perinæum, and anus, and sometimes even the bladder and uterus."

Dr. Egan's essay is principally devoted to the treatment of the disease. He deprecates strongly the employment of mercury, and in the condemnation of this medicine he is sustained by Lawrence, Carmichael, Ricord, and other distinguished surgeons. He admits, however, that there are a few cases in which mercury acts beneficially, but the indications for its use do not seem very plain.

"According to one author it may be prescribed where there is nothing but ulcerative absorption, without any trace of inflammation in the surrounding parts, and where no constitutional disturbance is present; according to another it should be used as a last resource, where every other remedy has failed to arrest the destructive process; and on the authority of a third, its use is only admissible when the ulcer assumes an indolent character. I need scarcely say, that definite as these directions may appear to the theorist, they will prove almost useless to the practical surgeon, in the treatment of the disease. Experience alone will solve the difficulty. As far as my ob-

* The pain and constitutional disturbance, however, often keep pace with the process of ulceration.

servation extends, I may remark, that the cases benefitted by mercury are "few and far between," and it is with fear and trembling I resort to it, even where other remedial agents have proved ineffectual."

The principal indications of cure are to subdue the accompanying fever—to allay irritation, and to check the sloughing process. To effect the first, Dr. Egan advises the use of the lancet, or of local abstractions of blood, and the employment of tartar emetic, when the condition of the patient will permit; but in broken down constitutions such active treatment cannot be borne. In such cases it is advised to give small and repeated doses of the antimonial in combination with opium. To allay the irritation the muriate of morphia is advised, to be given in pills at bed time.

"The grand object to be attained, to which the foregoing treatment is merely preliminary, and in comparison of which every other indication must be looked upon as subservient, is the arresting of the ulcerative or sloughing process. I will not stop here to recount the various remedies that have been had recourse to at different times, and by different practitioners, for this purpose, the task would prove as useless as it would be uninteresting, as many of them have long since sunk into deserved oblivion, but at once proceed to a plan of treatment, which is attended, for the most part, with beneficial results, and which I have now employed extensively in the wards of this hospital, with the most complete success. I allude to the application of the strong nitric acid, which is to be used freely to the sore, and repeated, until a clean vascular surface comes into view. The first or second application is not attended with any considerable degree of pain, as the disorganized material tends to protect the more sentient parts, but in proportion as the more sloughy matter becomes detached, the pain is increased on each successive application. I am in the habit of enveloping the parts in a warm poultice, immediately after the employment of the escharotic, which is most grateful to the patient, and assists the separation of the disorganized mass. If the slough, as occasionally happens, should be reproduced, it will generally be to a partial extent, and at this period equal portions of balsam of Peru and castor oil will hasten its detachment; poultices subsequently encourage granulation, and promote cicatrization.

"At the same time that active topical measures are resorted to, constitutional remedies must not be neglected. The administration of dilute nitric acid, in combination with the compound decoction of sarsaparilla, acts favourably in the early stages of the disease, but at a more advanced period the preparations of iodine appear to exert a considerable control over this species of ulceration. With this intention I prescribe the hydriodate of potash, commencing with five-grain doses, three times a day, and gradually increasing it to ten,

which I seldom am obliged to exceed; if pushed farther, the super-vention of colicky pains renders its discontinuance imperative."

For the eruption which sometimes follows such ulcers, and which is generally of the rupial form, Dr. Egan recommends, after the inflammatory symptoms are subdued, the use of the Hydriodate of Potash in doses of five grains, three times a day.

"When I was first appointed to this hospital, I was in the habit of treating these cases with alterative doses of mercury in the form of Plummer's pill; but although the apparent cure was in many instances expedited by that remedy, yet the relapses were so numerous, that I determined to abandon it to a great extent, and seek some other remedial agent; and none appeared to answer the desired object so well as the hydriodate of potash. My reasons for giving it the preference are—First. It cures the eruptive and ulcerative disease. Secondly. It is useful in these articular pains, so often accompanying it. Thirdly. It acts beneficially in the form of sore throat, which at a more remote period attends upon the disease: and lastly, it is particularly applicable in the treatment of nodes, which not unfrequently present themselves, especially after mercurial courses. As a local application, I have found the Unguent. Hydrarg. Nit. Oxyd., diluted with an equal proportion of lard, particularly useful, first, in tending to soften the crusts, and subsequently as a stimulant in assisting to heal the ulcers."

There are several other articles, of lesser interest, which our limits will not permit us to notice.

ARTICLE IV.

Gazette Médicale de Paris, No. 1 to 5—1845.

Journal des Connaissances Médico-Chirurgicales.

Bulletin Général de Thérapeutique Médicale et Chirurgicale.

We have received several of the latest numbers of the Journals above named, and propose to notice briefly some of the articles which they contain.

1. The Medical Gazette of Paris is one of the most popular journals of the French capital. It has now reached its 13th vol.; it is published every Saturday, in newspaper form, in numbers containing 16 pages of double columns, and its chief editor is M. Jules Guérin, of orthopedic notoriety. The price per annum is about \$9.

The leading Article in the first and the three following Nos., is entitled the "Disease of the sternal and vertebral articulations of the Ribs, with or without tubercular softening and necrosis of the Bones of the spinal column." By A. Toulmouche, M. D. &c., of Rennes, France. Although this is an excellent production, from the paucity of affections of bones, even of the vertebræ, in this section of country, we shall pass over it with only a few extracts. Dr. T. commences by acknowledging the difficulties in relation to the diagnosis in the affection. "Nevertheless," says he, "the works of M. M. Nichet, Nélaton, Parise, &c., have greatly advanced science, and dissipated in part the indefiniteness which obtains in the writings left by Pott, Pouteau, Brasdor, and many other pathologists of the last century. But they have not removed the uncertainty and obscurity which still reigns in the symptomatology. Did the disease under consideration, begin by attacking the parts situated superficially, it would not be so difficult to recognize it; but unfortunately, the first lesion is in the bodies of the vertebræ deeply lodged in the thoracic or abdominal cavity, and gives rise to collection of pus or softened tuberculous matter, inaccessible to all means hitherto employed for its early recognition. It is only when progress has been made by this affection in the advanced stages, and when paraplegia or paralysis of the bladder, succeed to the pre-existence of pain in the spinal region, or the detection of deformity in one or many spinal processes of the vertebræ, that we are certain in our diagnosis." This memoir of M. T. comprehends three orders of facts—viz: 1st. those in which there is necrosis of the head of a rib in its articulation with the vertebral column, destruction of this part and symptomatic abscess; 2nd. those where the same lesion has taken place, but with tubercular softening, and necrosis of the neighboring vertebræ; and 3rd. those comprehending the same morbid affections limited to the spinal column. We object to the word necrosis employed in this article, it should have been caries.

There is an Article in Ophthalmology, and particularly directed to the three images reflected in the eye; by Dr. Magne, of Paris. This writer states that since he addressed a memoir to the Academy of Sciences, relative to a black cataract upon which he had operated by couching, several of his professional brethren had called upon him for explanations in reference to the images reflected in the eye, and which induced him to believe that the discovery of his preceptor, the late Prof. Sanson, was neither acknowledged nor appre-

ciated as it should be. He then states that, in 1836, Dr. S. commenced to observe, and in 1837, demonstrated in his clinic, that when a candle was placed before an eye whose pupil was dilated, three images were seen, and succeeding each other from before backwards. The first and anterior one, is the most evident, and is upright or straight—the second or middle one is less distinct than the anterior, and the reflected image is reversed, or upside down—and the posterior is the faintest of all, and is upright like the first. Sanson and his pupils arrived at the same results in their investigations on this subject; and the explanation of these phenomena is, that the first or anterior image is produced by the cornea; the middle or reversed image is the reflection from the posterior segment of the crystalline capsule; and the third or posterior straight, is due to the reflection of the light from the anterior segment of the capsule. An opacity of the cornea destroys all the images; opacity in the anterior capsule prevents the two posterior; and that of the posterior capsule, the reversed image. In other words, in cataract of the posterior capsule, the middle or reversed reflection of the candle is not seen; in that of the anterior capsule or capsulo-lenticular cataract, the anterior or first upright image is alone visible. In this catoptric examination of the eye, the two following circumstances must be remembered, viz: to have the pupil well dilated and the room darkened.

The Review of Journals contains a notice of the Surgical clinic of Fribourg, service of Prof. Stromeyer, from 1st November, 1842, to end of October, 1843, 414 patients were admitted, and 245 consultations were held. There were 8 amputations, 6 of the leg and 2 of the thigh, 2 of this number died, 3 excisions of cancerous inferior lips, all cured, 4 cases of Lithotomy, all successful. We notice in one Journal, the case of a girl, aged 14, who in 17 days past 898 lumbricoides. Except being pale-faced, she had enjoyed good health. Means employed to expel the worms, not indicated.

At the session of the Academy of Sciences, M. Baldaconi presented a specimen of petrified animal substance, produced by long immersion in a saturated solution of 12 parts of bi-chloride of mercury and 1 or 2 parts of hydrochlorate of ammonia.

M. Maisonneuve proposed a new mode of Catheterism—viz: first to introduce a very small bougie of gum-elastic into the bladder, and then slide upon it a catheter open at both ends. This latter instrument is rendered easy of introduction by a thread of silk or metal,

tied to the external extremity of the bougie, after passing it previously through the catheter. This is now to be pushed gently upon the conducting gum-elastic into the bladder.

Dr. Roesch, who writes upon the subject, says, Goitre is the companion and precursor of cretenism, wherever this disease is endemic; at least there is always augmentation or degeneration of the thyroid gland and of the surrounding cellular tissue, with a lymphatic temperament and a physical and moral apathy.

M. Lereboullet, professor at Strasbourg, communicated to the Academy a case of distinct inflammation, and of its usual effects, intense redness, exudation of plastic lymph, formation of false membranes, agglutination and purulent secretion in a cold-blooded animal, (a species shark.)

2. The Journal of Medico-Chirurgical Knowledge, is issued every month in loose sheets, containing 46 pages, and is accompanied each year with two Atlases containing six Plates of Anatomy of the natural size, engraved upon steel. Price \$2 50.

The leading Article in the January No. is by M. Piorry, one of the Professors to the Faculty of Medicine in Paris, and is on the effects of Sulph. of Quinine upon the Spleen. Given in 20 gr. dose, in 40 seconds this organ, which was enlarged, (hypersplenotrophy,) began to diminish; and in five minutes the diminution was very considerable. Another similar dose on the next day reduced it to its natural size, and cured the patient.

In the sitting of the Academy, 2nd December, 1844, M. Maison-neuve proposed in cases of intestinal obstruction, to cut the intestine above, and secure it by sutures to another opening below.

M. Valenciennes was elected on the 9th December, in the section of Zoology of the Academy of Sciences, in the place vacated by the death of M. Geoffroy-Saint-Hilaire.

The Journal states that 800 Students had entered the School of Medicine in Paris, being 51 more than the preceding year.

The plates of the Atlas for January, 1845, are 2 for the external, 2 for the middle and 2 for the internal Ear. We need scarce add, they are most minute and splendidly executed.

3. The General Bulletin of Medical and Surgical Therapeutics, is edited by Dr. Miquel, and is issued once a month; each number contains 80 pages, and it is exclusively devoted to practice. Price \$1 50.

Our limits will not, at present, permit us to notice the contents of this work, but we may have occasion to recur to it hereafter.

M. Devergie says he has employed the following recipe for an ointment for Chilblains for several years, and almost always with success.

R. Axungia, ʒjss; Creosote, 10 drops; Liquor plumbi sub-acetatis, 10 drops; Thebaic Extract gr. 2. M. Make Ointment. Spread morning and evening a thin layer of this ointment upon the parts affected with chilblains, and maintain it by means of linen.

We learn from the Bulletin, that the number of physicians in Paris is 1430, a pretty large regiment. Total, in France, 18,803. This, we think, is about the number in our own Country.

Local Hysteria. By R. B. TODD, M. D., F. R. S., *Physician to King's College Hospital, &c.*

It is difficult to assign a cause for the fixation of the hysterical phenomena in particular localities. We have, indeed, very much the same difficulty here, as in explaining other examples of general or constitutional disease exhibiting local symptoms. It may be that, in many cases at least, the local symptoms should be regarded as reflected nervous phenomena, either of sensation or motion; some part of the great gastro-intestinal surface, or some internal viscus, being the seat of a primary disturbance, which creates an irritation of a portion of the nervous centre, and this affects some sentient or motor fibres connected with it, which propagate their irritation to some peripheral region. Or, again (and this perhaps is of rare occurrence), there may be some immediate irritation of a part of a nervous centre, not propagated from any sentient surface, but caused by some local disturbance of the circulation, and, consequently of nutrition. Or, lastly (and this is not unfrequent), the patient may have received a strain or hurt at some part, and her attention being strongly directed to that part, and her anxieties aroused respecting it, that part has become the seat of a fixed pain. And even if there has been no previous injury, there can be no doubt that a part may become irritable and painful, about which the patient's thoughts and anxieties have been occupied for a considerable time. I could quote to you many authentic instances of this power of the mind to create pain, as it were, or to perpetuate it, after it had been excited by some physical cause. But it must suffice for me, at present, to direct your attention to the fact as one of which it is most important that the practitioner should be cognizant. I do not profess to give an account of *all* the forms that local hysteria may assume, so many and so various are they. I shall, however, briefly refer to the principal varieties that are likely to be met with in practice.

Pain in the Side.—Among the most common forms of local hysteria are those pains in the right or left side; of these I believe the most frequent is that on the left side; the pain is referred to a spot immediately beneath the left mamma, corresponding very nearly to the situation of the apex of the heart. In most cases the pain is increased on pressure: sometimes, however, firm and steady pressure gives ease, and I have sometimes observed patients to make pressure themselves, in order to obtain some relief. It is quite extraordinary what a common symptom this pain is, or that on the right side. If you watch the out-patients of this hospital for a day or two, you will find a large portion of the female applicants complaining of pain in the left or right side. It is very frequently (that on the left side especially) accompanied with leucorrhœa or some form of uterine derangement, so much so, that now, after I have learned that a young woman of hysterical appearance complains of this pain, my next question invariably refers to the existence of leucorrhœa. In some instances this pain is always increased on inspiration, and is attended with a short but frequent cough, without expectoration. If there be any emaciation, or if there has been phthisis in the family, the fears of the patient's friends become excited, lest this cough and pain should be the forerunners of consumption. And it is not always easy to assure oneself that the irritation of nascent tubercles may not have some share in the production of the phenomena. Some time ago I was consulted in the case of a young lady of good family, who, from a long-continued pain in the left side and frequent cough, was considered to be phthisical, and, in consequence, was kept in a regulated temperature for a considerable period. By several very careful examinations of the chest, I felt myself at liberty to pronounce her free from tubercular disease, and prescribed an opposite mode of treatment, good air, carriage exercise, and tonics, with great advantage; and now I sometimes see this lady, who enjoys good health, but is subject to the occasional recurrence of this pain in the side and cough, whenever any anxiety occurs to excite her hysteria.

Irritable Spine.—The irritable spine is another form of local hysteria, which, if treated on erroneous principles, or if its real nature be not detected, may lead to very serious consequences. This affection has been deemed of sufficient importance by some practitioners, to merit its being designated by the special name of *spinal irritation*. But this term is highly objectionable; for it implies that the essence of the patient's malady is to be found in the spinal affection, and that the treatment is chiefly to be directed to relieve the local suffering. And many who have written upon this subject have striven, on very insufficient evidence, to show that the spinal cord itself is at fault. The truth, however, is that the spinal irritation is but a symptom of a general state, a local malady depending on a constitutional cause. These cases are often mistaken for actual disease of the vertebræ, and patients have been confined to the recumbent posture for its cure, a mode of treatment admirably calculated to perpetuate the real com-

plaint. It often happens that the patient has difficulty in walking, and this is regarded as the consequence of the spinal affection. She at first finds herself easily fatigued; the pain in her back is increased by walking or standing; she gradually becomes disinclined to move, and gets accustomed to the horizontal position, and therefore readily yields to any suggestions in favor of quiet, or reluctantly obeys the advice which recommends an opposite plan. The most acute pain is felt over a particular spot on the back. Slight pressure will produce it, when the patient's attention is alive to it; and firm pressure will often fail to create it when her attention has been diverted from it. But there is always a good deal of tenderness in the whole course of the spine, and in other parts also. You will derive great assistance in your attempts to distinguish the real nature of this affection, by attending to the nature of the pain; it is always of that *exaggerated* kind which I alluded to in my last lecture, as being characteristic of hysterical pain. It is much more acute than the pain which attends diseased vertebræ; it is more superficial, so as often to appear, as I believe it is, seated in the skin that covers the spinous processes. We had one of these cases here not long ago, which very forcibly illustrated the importance of a right diagnosis. A young woman, of highly hysterical constitution, was sent here for pain in the back and weakness of the lower limbs; she declared that she was quite unable to walk, although she could move her limbs very well as she lay in bed. There was great tenderness over two vertebræ in particular, but the whole spine was tender also. She had been treated for some time by rest, and her spine had been cauterised. We humoured her a little for a day or two, and then I thought it right to assure her that she could walk, and that she must walk a little every day. I had her taken up and supported between two women, and by making her move about the ward in this way a little every day, and increasing the walk each succeeding day, she soon began to find out that she had the use of her limbs, and ere long was enabled to walk to the shower-bath.

I may remind you of another case still in the hospital, in which this plan of treatment was pursued with very striking success. This is the case of the woman named Collier, in Augusta ward, who has been so long under treatment. She was sent here completely paralytic, and stated that she had been bed-ridden for ten years. On examining her I found some tenderness of spine, but no unnatural condition of it. The power over the bladder and rectum was unimpaired. She is highly hysterical and rheumatic also. The lower extremities, from disease, were completely wasted; she could not stand, but as she lay could move about her limbs freely. I encouraged her to expect a cure, and told her that she must exert herself. She was supported by the nurses and made to walk a little every day, and after persevering a few weeks in this treatment, she was able to walk a little alone; by-and-by she got on with the help of a stick, and now she can walk up and down stairs without any assistance. Had

we treated this poor woman on the supposition of her having spinal disease, she would have been bed-ridden all her life. And, indeed, I attribute the slowness of her recovery (for she has been several months under treatment) to the extreme atrophy of her muscles, and, as we may fairly assume, of her nerves too, which was brought on by the disuse of them for so long a time.

Pain in the region of the sacrum and in that of the coccyx are less common forms of local hysteria. They may probably be connected more directly with uterine irritation, and in some instances, perhaps, with imperfect action of the rectum, and accumulation of flatus in it.

Local Pulsation.—We had lately a case in which this form of local hysteria was very well marked; and it was accompanied with another symptom not uncommon in hysterical persons. This was a strong pulsation of the aorta in the epigastric region, simulating aneurism. For some time the pulsation appeared so strong, and was so circumscribed, that had I not known the decidedly hysterical character of the patient's constitution, I should have felt considerable apprehension on her account. However, as her strength improved, and her catamenia became regular, these symptoms disappeared.

Hysterical Affections of Joints.—The profession is much indebted to Sir Benjamin Brodie for having directed attention to the frequency with which local hysteria manifests itself, especially among the higher classes, in the form of affections of the large joints, simulating those diseases with so much accuracy that practitioners have frequently been misled by it. Sir Benjamin states the remarkable fact, which no one is so well able to ascertain as a surgeon of his great experience, that four-fifths of the supposed cases of joint-disease which occur among the higher classes are hysterical. This statement ought to impress us strongly with the importance of being well acquainted with the peculiar features of these hysterical affections of the joints.

You will, of course, expect to find in these cases indications of the hysterical constitution; globus; perhaps occasional hysterical paroxysms; general irritability; enfeebled nutrition; pain easily excited on pressure at various parts of the body; irregular catamenia, or some uterine disturbance. The joints which are most frequently affected are the hip and knee. The patient keeps the painful joint quite at rest, being fearful of the least disturbance. When the joint is moved, she will call out with much more expression of pain than if there were actual ulceration of the cartilages. "There is always exceeding tenderness," Sir Benjamin Brodie remarks, "connected with which, however, we may observe the remarkable circumstance, that gently touching or pinching the integuments in such a way as that the pressure cannot affect the deep-seated parts, will often be productive of much more pain than the handling of the limb in a more rude and careless way." As, however, in most hysterical affections, if you can succeed in engaging your patient's attention about some other object, and thus directing her thoughts from her own sufferings, you will find that the joint can be moved

with comparatively little or with no pain. I need not, however, dwell upon this subject, for you will find it admirably discussed in Sir Benjamin Brodie's "Treatise on the Joints," and in a very interesting and practical little volume on "Local Nervous Affections," which I strongly recommend you to study.

Irritable Breast.—Another very serious form of painful hysterical affection is the irritable breast. It is not generally attended with swelling or enlargement. The irritability is excessive, and the patient shrinks quite as much from superficial as from deep-seated pressure, and even before she has been actually touched at all. These characters, along with the evidence of hysterical constitution, are sufficient to enable the attentive practitioner to distinguish the real nature of the affection.

Aphonia—I have alluded to various forms of hysterical paralysis; you may have numbness in the course of particular nerves, or paralysis of motion, in some cases putting on the features of hæmiplegia—in others of paraplegia. Hysterical aphonia must be regarded as the same kind, the palsy or weakness affecting the muscles of the larynx. The patient is unable to speak, except in a whisper, and even then not without effort. It often begins and ends suddenly. Sometimes it remains after a severe hysterical paroxysm has passed away. This is a form of local hysteria of very common occurrence, and not likely to be mistaken for any laryngeal disease, for respiration remains quite unimpaired.

Paralysis of the Bladder.—Hysterical paralysis of the bladder is also common, and much mischief may arise from neglect of constitutional treatment, and too close attention to the local affection. Sir Benjamin Brodie lays down the rule, that in these cases the catheter should not be had recourse to; and the only exceptions to it are in those extreme cases in which actual paralysis has taken place, and the bladder is likely to become diseased, if not artificially relieved. A similar want of power over the rectum may occur in hysterical women. I have known women complain that they were unable to retain the contents of the rectum, although they were conscious of fæces having passed into it. With respect to many of these cases of hysterical paralysis, there is much truth in Sir B. Brodie's remark, "that it is not that the muscles are incapable of obeying the act of volition, but that the function of volition is suspended."

Spasmodic Affections.—Among the various forms of local hysteria we may class some singular spasmodic affections which often prove exceedingly troublesome; for example—

Laryngeal Affections.—In the woman Collier, whose case I have had occasion to refer to as an instance of paraplegia, we had an example of a spasmodic affection of the muscles of the larynx, very much resembling the spasmodic croup, or laryngismus stridulus, which occurs in children. This attack was always preceded by depression of spirits and hysterical crying; the breathing became difficult, and both inspiration and expiration were attended with a

stridulous noise; there was also a loud barking cough, which could be heard at a considerable distance. The attack passed off as the temporary excitement disappeared.

Hysterical Sobbing.—One of the most singular cases I ever saw was that of a girl named Howe, ætat. 19, who was admitted in consequence of a peculiar spasmodic affection of the diaphragm, of a most severe kind, and which, while it lasted, was most troublesome and painful. This girl has been a long time in the hospital. At her admission, on the 28th of March, she stated that for the last three months she had been very subject to leucorrhœa. In other respects she was in good health. Her face has the aspect of hysteria; the full upper lip is very well marked. Four days before her admission, in taking down a bedstead, she fell and struck the right side of her abdomen. She suffered so much pain at the moment that she was obliged to rest for ten minutes; she then resumed her work and thought no more of the accident. In half an hour she was seized with a catching of her breath, and with pain in the right side of the abdomen. This continued for two or three hours, so as to interrupt her work, and then went off. Her bowels were open at the time, but she is of costive habit. In the evening the catching of her breath and the pain returned; it now continued some time, so that she scarcely lay down during the night. Next morning there was great epigastric tenderness, and she was unable to bear the pressure of her stays. The catching of the breath and pain in the side continued to recur in fits till the morning of the 28th, when they discontinued, but returned in the evening, and have continued at intervals ever since. At our first visit we found her affected with this catching of the breath. It exactly resembled a violent fit of sobbing, unattended with flow of tears. There is a jerking movement of the neck from side to side with each sob, but the limbs are motionless. Any excitement increases the sobbing. It was much increased by our visit, and subsided after we left. On the 29th, whenever she was visited by myself, or by the physician's assistant, the sobbing was brought on. The pressure of the stethoscope in exploring the chest was sufficient to bring it on. The upper extremities are now thrown into jerking movements, resembling those of chorea, shortly after the sobbing begins. The slightest touch on the epigastrium or tickling the soles of the feet brings on the paroxysm, even when her attention has been directed to some other object.

Her treatment consisted in free purging for the first few days, lest there should be any lodgment in the intestinal canal, and subsequently tonics. On the 31st her attacks ceased, and as she remained quite free up to the 5th of April, and her health was much improved, she was discharged. She was, however, readmitted on the 10th, with a recurrence of the paroxysms, without any apparent cause. They are accompanied with jerking movements of the upper limbs, and tremblings of the lower ones, which give her an unsteady gait in walking. Pressure excites or increases the sobbing, particularly

when applied on the right side; and if the pressure be continued, the sobbing becomes excessively violent, and the whole body is thrown into convulsive movements. The fits last for three or four hours, during which time the nurse is obliged to walk with her up and down the wards or passages; for she cannot remain still, during the whole time she is affected with jerking, chorea-like movements. It is extraordinary what a slight pressure will excite the sobbing. If she accidentally press the epigastrium herself, it will come on; the weight of the bed-clothes, the least pressure or even touch with the top of the finger, or even the near approach of the finger to the epigastrium, will excite it. She had followed a tonic treatment for a considerable time without any benefit to these paroxysms. I determined now to try a succession of blisters to the epigastrium. The first excited a very severe paroxysm; however, by perseverance in the use of them, she has not only become able to bear them, but the paroxysms have considerably diminished in frequency and severity, so that now she can bear a good deal of pressure without inducing the sobbing.

Sir B. Brodie has recorded a case very similar to this. A young married lady, who was liable to ordinary attacks of hysteria, complained of a tender spot on the anterior part of the abdomen, a little below the ensiform cartilage. The slightest pressure of the finger on it caused excessive pain, and was followed by violent agitation of the whole person, bearing a nearer resemblance to the convulsive motions of chorea than to any thing else, and continuing for several minutes.

Hysterical Sneezing.—Women are sometimes attacked with violent fits of sneezing, coming on at particular periods and lasting for a considerable time. Of my own knowledge I am aware of but one instance of this, in a newly married lady, in whom the fits of sneezing used to come on early in the morning. There was, I had reason to believe in this case, great disappointment that the signs of pregnancy did not appear about the usual time; and it was curious that these attacks should have come on chiefly when the morning sickness would have shown itself in the early stage of pregnancy. Women who are expecting pregnancy become very familiar with the ordinary symptoms of it. Sir B. Brodie relates two cases of this kind, in which the fits of sneezing were severe, and do not appear to have yielded readily to treatment. In the case to which I allude no relief had been obtained when I last heard of the patient.

Lancet, July 15, 1843.

PART III.—MONTHLY PERISCOPE.

Hooping Cough.—The popular and professional catalogue of remedies for hooping-cough is both lengthened and varied, proving the usually obstinate nature of the disease. It cannot, however, be doubted that particular combinations have at times been attended with more than ordinary success; and it is the part of sound wisdom to treasure up these evidences of remedial triumphs, since circumstances may arise in the practice of all, where we are baffled in the application of our general principles, and are glad to resort to more specific and empirical means. There is, no doubt, a tendency in most minds to place exaggerated reliance on particular remedies, and to attach to them results which are attributable to the natural progress of the disease; but, on the other hand, it is possible to under-estimate their value, and to adhere too obstinately to imaginary principles. Success is, after all, the best test of being right, though it is often very obscurely obtained; and in the practice of our art we are frequently compelled to be content with results apart from their explanations, and to submit to failure where our theory seems most complete.

Dr. Thompson considers prussic acid his sheet anchor, gradually increasing the dose, and combining carefully regulated temperature with a milk and vegetable diet. He says the disease seldom resists more than four to five weeks.

When the acute symptoms have subsided, the following extensively used formula of Dr. Beatty, of Dublin, recommended by Dr. Graves, has proved very useful :

R. Compound tincture of bark, five ounces; tincture of lytta, tincture of camphur, of each half an ounce. Mix. A tea spoonful three times a-day in linseed or barley tea.

Above five or six years of age the dose may be increased one third daily until half an ounce is taken.

The liquor arsenicalis, in decoction of bark, is favorably mentioned; and in the second volume of the "Provincial Transactions," p. 412, a combination of the tincture of lytta with the tincture of lobelia is stated to have proved successful.

Belladonna, by liniment, plasters, and internally, is undoubtedly a valuable agent. Dr. Waldeck, of Berlin (Bul. Gen. de Ther. 1838), gave from one-tenth to one-twelfth of a grain for a dose, and speaks very positively in its favour. Dr. Lombard, of Geneva (French "Lancet," 9th June, 1838), mentions as a sure symptom of the decline of the disease, the greater frequency of accesses during the day than night, and *vice versa*. He speaks highly of the sesquioxide of iron in diminishing the number and violence of the fits, giving twenty-four to thirty-six grains a-day in divided doses. Dr. Steymann ("Bul. Gen. de Ther." March, 1838), brings forward similar evidence.

Dr. Crossley Hull's great remedy in all cases, was powdered alum, which he prescribed in a little water eight times a day, beginning with ten grains, to be increased two grains each dose till twenty are reached, which was then continued till the cough had ceased, which he states was the case generally in a week or less. The above doses are for young persons, about fourteen; adults may increase the dose to twenty-six grains. Infants are to begin with four or five grains, increasing two grains a dose to fifteen. No other medicine was given; milk to be avoided.

Dr. Reece strongly advises a warm irritating plaster to the chest, and the following medicine:

R. Tincture of assafoetida, one drachm; tincture of opium, ten minims; powder of ipecacuanha, ten grains; water, two ounces. Mix. A tea spoonful every three hours to a child two years old, increasing the dose ten minims for every year.

When this fails, the two following formulæ are (too) highly praised:

R. Powdered leaves of conium, one scruple; mint water, two ounces; syrup, two drachms. Mix. A tea spoonful three times a-day to a child of any age, adding ten minims to the dose, till nausea and giddiness are felt.

R. Di-acetate of lead, four grains; syrup of poppies, two drachms; fennel water, two ounces. Two tea spoonsful to a child from two to ten years every five hours; half an ounce for an adult.

It is said to cure generally in three days (?). There is other confirmative evidence in favour of lead in this disease, and a formula in combination with conium is given in our report of the Reading Pathological Society for 1842.

Mr. C. H. Chavasse ("Lancet," May 30, 1840), speaks highly of the following formula:

R. Sulphate of copper, half a grain; syrup of poppies, half an ounce; anise water, an ounce and a half. Mix. A tea spoonful to be taken every second or fourth hour, according to age.

Sir William Watson's celebrated prescription was—

R. Tartar emetic, one grain; tincture of opium, twenty minims; distilled water, one ounce. Mix. A tea spoonful every, or every other night.

Mr. Pearson, after premising an emetic, relied much on—

R. Tincture of opium, one minim; ipecacuanha wine, five drops; carbonate of soda, two grains; water, half an ounce. Make a draught to be taken every four hours.

Dr. C. Wachtl, of Vienna (*vide* Provincial Journal, Jan 21, 1843), has found Cochineal very useful in rapidly checking the paroxysms.

R. Cochineal, ten grains; bitartrate of potash, one scruple; sugar, one ounce; water, six ounces. A tea spoonful every four or six hours.

It is an old and popular remedy.

The following is Roche's far-famed embrocation:

R. Olive oil, one ounce; oil of cloves, half an ounce; succinum oil, half an ounce. Mix.

We are not the advocates of one or all of the above, but think their occasional efficacy sufficiently attested to justify their use in particular cases.—*Prov. Med. Jour.*, May 13, 1843. (*Braithwaite's*.)

Cases of Acute Diseases in the Throat and Larynx. By Dr. JAMES ARTHUR WILSON, Physician to St. George's Hospital.

There can be no doubt that many lives are lost by the above inflammations for want of tracheotomy. In Nov., 1830, Dr. Wilson, with Dr. Nevenson and Mr. Keate, attended a gentleman who died of cynanche supervening on erysipelas. On examination, the epiglottis and posterior membrane of the tongue were found to be highly vascular and thickened, and pus was infiltrated in the cellular membrane of the fauces. The larynx below the cordæ vocales, and the trachea, were free from disease or obstruction. Here was a case where tracheotomy would have saved life, almost to a certainty. The event made a deep impression on Dr. W.'s mind, and was of service thirteen years afterwards.

Case.—Mr. W. C., aged 27, full habit, got heated at a ball, and caught cold going home. He was unable to sleep, from general uneasiness and sense of choking on attempting to swallow. Leeches, calomel, and other measures, were employed; but the breathing was not relieved, even by the abstraction of twenty-four ounces of blood from the arm. In the evening of July 8, 1843, he was *in extremis*, and Mr. Keate exposed the trachea below the thyroid gland, and made an opening into it, inserting a canula in the aperture. Instantaneous relief was the consequence.

"On the first rush of air into the trachea, the patient appeared to feel instant relief, and his countenance began at once to resume its natural expression; but from this time not two minutes could have elapsed, when he was suddenly attacked by most violent spasms of his whole frame, with a struggle for breath, as if threatening immediate suffocation. All consciousness directly ceased, the eyelids closed, the face was livid, the features were distorted, the blood, still bubbling from the wound, became suddenly black as ink. The breath was drawn convulsively, and at long intervals. All movement, excepting that of the pulse, had ceased, and the patient appeared, literally, at his last gasp. During this awful crisis of the young man's fate, which lasted for perhaps a minute, (seemingly for a much longer time,) his head was held forcibly back,—the canula was withdrawn,—and the orifice in the trachea cleared from blood, and kept widely open. The breathing at length became more natural; the face, no longer ghastly, began to resume the character and tint of life. Not long after this most fearful convulsion, a large quantity of mucus, mixed in part with blood, was rejected, in long viscid ropes, from the mouth; and it was then found that the patient again breathed through the larynx. Upon this, the canula was finally withdrawn. A profuse perspiration now burst forth from the face, neck, and chest of the patient, who gradually recovered his consciousness, and expressed by writing that his 'breathing was quite easy.' He slept at intervals during the night, and was convalescent from this time."

Although, as Dr. Wilson remarks, the operation can hardly be too late, yet the chance of success is greatly lessened by delay, because the patient is being poisoned by his own blood. There is a good deal

of management necessary in preventing the blood from flowing down the trachea into the lungs. The operation of tracheotomy has now been so often performed with success, that no patient should be allowed to be suffocated by obstruction about the throat, without opening the wind-pipe. A gentleman of our acquaintance breathed more than twenty years through a tube.—*Medico-Chirurgical Review*.

The Physiological and Therapeutical Effects of Indian Hemp.
By. Dr. LAURIE.—The following are the principal conclusions to which his experiments lead:—

1. It seems to belong to that class of narcotics which rapidly induce excitement and intoxication, followed by sleep, neither sound nor refreshing.
2. In a full dose it acts powerfully on the heart, causing palpitations, and rapid, weak, intermittent pulse; and on the nervous system, producing delirium, coma, convulsions, and dilated pupils.
3. Its effects are generally transitory. In one case, however, the intoxication and dilatation of the pupils lasted nearly forty-eight hours.
4. It is a very uncertain agent, in some cases producing the most violent and seemingly dangerous symptoms, in others being nearly inert.
5. It very frequently causes vomiting, which, whether it occur spontaneously or from emetics, very speedily relieves its unpleasant, and perhaps dangerous effects.
6. Applied around the eye, it does not dilate the pupil.
7. It exerted little influence on the few patients to whom it was given in the form of enema.
8. He does not think it is a valuable addition to our narcotic medicines. In very few instances did it act as an agreeable soporific and anodyne; in none did it succeed when opium had failed; and in one case only was it preferred to opium.
9. So far from acting generally as an anodyne, its effects was so disagreeable, that the majority of those who took it once, only did so a second time on compulsion; and this is the more remarkable, as the patients on whom he experimented belong to a class to whom stimulants of all kinds are familiar, and who would greedily swallow opium and spirits to an unlimited amount.
10. It caused an immediate craving for food, and, in a few, permanently increased the appetite.—*Edinburgh Monthly Journal*.

Nitrate of Silver in Chronic Diarrhœa.—Drs. Bognini and Belliniere, in obstinate diarrhœa and dysentery, have found great advantage from the use of enemata and of crystalized nitrate of silver. These enemata are prepared by dissolving half a grain of nitrate of silver in half a pint of water. The patient should retain the enema for some hours. If necessary, the dose of nitrate of silver may be increased to three grains for each enema.—*Terza Statistica Nosologica, &c.*, 1843. p. 37, quoted in *Annales de Thérapeutique*, Nov., 1843. *American Journal of Medical Sciences*.

The Use of Pure Tannin. By ROBERT DRUITT, Esq.—In any case in which a vegetable astringent is indicated, Mr. Drutt believes that the tannin ought to have the preference. A simple solution of it, in distilled water, he says, is much more easily and quickly prepared, as well as much more elegant, than the ordinary decoctions or infusions of oak-bark, catechu, &c.; moreover, it may be prepared of uniform strength, and free from foreign inert matter, and is not liable to decompose quickly; in fact, it has all the advantage which the other simple vegetable principles have over crude preparations from the herbs or extracts in which they are contained.

The cases in which Mr. D. has employed it, are sore nipples, excoriations about the anus and scrotum, piles, leucorrhœa, atonic phagedenic sores, tooth-ache, aphthous sores in the mouth, severe salivation and relaxed sore throat.

For *sore nipples* especially, Mr. D. has found it "invaluable." Every accoucheur knows what a source of wretchedness and illness these are to the young mother, and how difficult it often is to find a decisive remedy; but Mr. D. has never been disappointed in the use of tannin, except once in a neglected case, with deep irritable cracks, for which it was necessary to use the lunar caustic. The form in which he employed it, is a solution of five grains in an ounce of distilled water; this is applied to the nipple on lint, covered with oil silk.

For the itching excoriations about the anus and scrotum, which so much infest old men, he has used it with benefit, but prefers lemon juice as a local application. For piles, with mucous discharge, he has also found it of use, but he cannot say much on this point from his own experience.

"In one or two cases of lingering atonic phagedena," says Mr. D., "I have found it of some service, sprinkled thickly on the sore; but more particularly so in those aphthous ulcers which sometimes occur in the mouths of adults, from acidity of the stomach, and congestion of the liver. I may say that I believe it the best possible remedy for severe salivation, and for all cases of relaxed sore-throat attended with superabundance of mucus. It coagulates the mucus and enables the patient to get rid of it easily. Of course I do not use it to the exclusion of constitutional remedies; but of all the local means of making the mouth comfortable, I believe it to be the best.

"But of all the cases for which it is adapted, that common troublesome complaint, tooth-ache, is that in which I believe it is most to be depended on. For this piece of useful knowledge I am indebted to my friend Mr. Tomes, and I have tested it by ample personal experience. It will often be found, as Mr. Tomes told me, that the gum around a carious tooth is in a spongy, flabby condition; a little piece of it, perhaps, growing into the cavity. The ache, too, is often quite as much in the gum as in the tooth itself. But, be this as it may, when the tooth aches, let the patient wash out the mouth thoroughly with a solution of carbonate of soda in warm water; let the gum around the tooth, or between it and its neighbors, be scarified with a *fine* lancet; then let a little bit of cotton wool, imbued with a solution of a scruple of tannin, and five grains of mastic, in two drachms of æther, be put into the cavity, and if the ache is to be cured at all, this plan will put an end to it in nine cases out of ten. I think that practitioners are to blame in not paying more attention to the cure of tooth-ache; I am convinced that, in most cases, it is as curable as a colic or a pleurisy; the chief points being to open the bowels, and put the secretions of the mouth in a healthy state, and to apply some gentle astringent and defensative to the diseased tooth, till it is capable of

being stopped by some metallic substance. I say emphatically a *fine* lancet, because the coarse, round, blunted tools that are generally sold under the name of gun-lancets, only bruise the gum, and cause horrible pain. The lancet which I use is sickle-shaped, cutting on both edges and finely ground; and it guarded with the middle finger of the right hand, it may be used in the case of the most unruly children, without any possible ill result."—*From Am. Jour. Med. Sciences.*

A Test for Bile.—M. Pettinkoffer, a German student, has discovered a test for the presence of bile. It consists in adding to the fluid supposed to contain bile, concentrated sulphuric acid, until it becomes hot, and then dropping into it a solution of sugar (syrup,) the presence of bile is manifested by the mixture becoming of a deep pink or red colour, varying in intensity with the amount presept.

* * This seems to be a merely accidental discovery, the reaction being inexplicable upon any known relation or analogy between the substances.—*London Lancet.*

On the passage of Medicinal Substances through the human economy.—MM. Millon and Laveran, after going through a series of researches, with a view to ascertain in what manner certain medical substances affect the urinary secretions, have arrived at the following interesting results :—

The substances experimented on were, principally, the double tartrate of soda and potash, which was administered 268 times; the sulphate of soda was administered fifteen times; sulphur, four times; and salicine, ten times. The tartrate of soda and potash was chosen in order to ascertain whether the opinions generally entertained respecting the conversion of alkaline tartrates, citrates, and acetates, into carbonates, into the animal economy, are correct. So far from this being *invariably* the case, it was found that the transformation was very uncertain. Thus, of the two hundred and sixty-eight cases in which the double tartrate was administered, in one hundred and seventy-five the urine was alkaline; in eighty-seven, acid; and in six neutral. The mode of expulsion of the salt appears to depend nearly entirely on the mode of administration. If taken in large doses—ten or twelve drachms, for instance, in a limited period—its effect is generally concentrated on the intestinal canal, and its ingestion is followed by several liquid stools. Sometimes, however, no purgative effect is produced on the digestive tube, and then the urine is alkaline, the salt evidently being absorbed and expelled through the urinary organs. When the same quantity is administered in fractional doses, during a period of ten or twelve hours, the effect produced is different. The salt does not then give rise to purging, but is absorbed and eliminated as an alkaline carbonate by the urinary organs. In the first instance, indigestion follows its administration, and it may be looked upon as an aliment; in the second, there are absorption, assimilation, and secretion, and it is then a medicine. In order to ascertain whether, when the urine was acid or neuter, after the administration of the salt, the soda and potash might

not escape non-decomposed, combined with tartaric acid, or united to some organic acid, several experiments were instituted, by which it was ascertained that the proportion of alkali contained in the acid or neutral urine was identically the same as that contained in normal urine. It thus became evident that the double tartrate did not escape, as such, along with the urine.

Robust men, slightly unwell, shewed the greatest aptitude to digest the tartrates. They occasionally digest part of the salt, even when given at once in large doses. Sometimes, although administered in fractional doses, the urine remained acid. This was the case when the patient was attacked with diarrhoea, or was in an acutely febrile state. But even then, by persisting in its use, the urine, at first acid, gradually became alkaline. On the other hand, absorption was favoured by constipation.

The administration of the citrate, in absorbing doses, was tried in pneumonia and rheumatism. The blood of the patients thus treated was analyzed ten times. The fibrin was not found to have diminished in quantity, and the buffy coat was as great as before it had been given. Although the alkaline carbonate was formed in the urine, these diseases progressed as usual. The increase of the powers of oxidation, rendered evident by the excess of urea, led to its trial in cases in which the nutrition was languishing; and it was found useful in general debility, phthisis, albuminuria, &c.

The sulphate of soda gave the same results as the double tartrate. Sulphur was never found in the urine, under whatever shape it was administered.—*Ibid.*

MEDICAL MEMORANDA.

Quinine in Ague.—Dr. Stratton thinks a single large dose in the interval, cures more rapidly than repeated small doses.

Treatment of Neuralgia.—Dr. Jacques, of Antwerp, recommends inoculation, by means of a vaccinating lancet, with a solution of sulphate of morphia.

M. Lafargue recommends inoculation in the same way, with a saturated solution of veratria; and M. Roclauts, a Dutch physician, gives nux vomica, in doses of from three to ten grains in the twenty-four hours.

Succinate of Ammonia in Delirium Tremens.—M. Scharn has seen the most furious delirium overcome as by enchantment, and the disease removed in a few hours, by the use of this remedy alone.

Arsenic in Peritoneal Dropsy.—Dr. Debavay has treated a case successfully. One-twentieth of a grain was given twice a day. The improvement was notable in six weeks, and in six months all symptoms had ceased, and the catamenia, which had been suppressed, were restored.

Mustard in the Convulsions of Children.—Dr. Tripler was led to the employment of this remedy as an emetic, and finding it arrest in

a few minutes an attack of convulsions that had lasted five hours, he has employed it in three other cases with complete success.

Prophylactic Remedy against Ptyalism.—Dr. Schoepf recommends the following tooth-powder during the administration of mercury, to prevent salivation. Dried alum, powdered, ℥ij.; powder of cinchona, ℥j.; to be used by means of a soft brush, morning and evening.—*Ibid.*

We take the following Extracts from a notice in the last No. of the Medico-Chirurgical Review, of a work entitled "Facts and Observations in Medicine and Surgery. By JOHN GRANTHAM. :

Extensive Burn.—A case of a burn from gunpowder is related, in which nearly the whole of the trunk and a portion of the extremities were involved, "the whole measured above 600 superficial inches, or four feet, 24 inches, and averaged a quarter of an inch in depth. Also the subcutaneous structure was completely lost, so that the arteries and veins were seen, as if neatly dissected, lying on the surface of the muscles and fascia." The successful issue of the case reflects great credit upon the author, especially as more than one untoward occurrence intervened. Three principles especially guided him, the due supply of nutritive food, the regulation of the animal heat, and the external and internal use of antiseptic agents, such as the application of yeast, the evolution of oxymuriatic gas into the apartment, the administration of alkalis, &c. During the extensive suppuration which occurred, six pints of milk in the twenty-four hours served to support the youth's (æt. 17) strength. A sphacelated wound over the sacrum, an attack of bronchitis, and an extensive re-opening of the wound by erysipelas, successively retarded the cure, and long rendered recovery apparently hopeless. It required several years to produce entire healing, during and subsequently to which there has been much tendency to congestion of the brain, requiring small depletions and aperients, and attributable to the imperfect re-establishment of the functions of the skin over so large a surface.

Galvanism.—We quite agree with Mr. Grantham, that the application of galvanism in paralysis, and other chronic affections of the nervous system, has been too much neglected. Indeed, its administration seems to be confined almost to empirics, who apply it in all cases indiscriminately, and consequently do more harm than good. Why a full and fair trial of its medicinal powers should not be made in some of the numerous chronic cases which encumber the hospitals, we cannot imagine. Mr. Grantham relates some cases in which he found this agent, carefully administered for a prolonged period, completely successful; and states the results of his experience in its employment in these conclusions.

"1. Galvanism is identical with the vital action of the nerves of organic life, and the nerves of volition. 2. Its action is determined by the healthy condition

of the brain and spinal marrow. 3. The skin must possess a normal sensation, as well as temperature, before the galvanic action can affect the muscular fibre. 4. The positive plate or wire should be applied over the region of the origin, and the negative to the region of the termination of the nerve. 5. The galvanic influence, when passed along the spine, will be most active in the paralyzed limb. 6. Galvanism is assisted by the alkalis and mercurial action. 7. It restores diminished temperature, decreased circulation, and lost muscular action, in the following order: 1st, temperature, 2d, circulation, and muscular action last. 8. It has no effect in disease that alters the structure of nerves. 9. It supersedes manual friction. 10. It is assisted by immersion of the affected limb in a warm bath, into which, the negative plate or wire is placed. In passing a current from the head through one half of the body, the foot should be immersed in warm water. 11. It is injurious when much pain is caused in the muscles by its application. 12. It may be carried to an undue extent, so as to produce congestion of the brain."

On Extirpation of the Superior Cervical Ganglions of the Sympathetic Nerve.—M. Dupuy (the Alfort veterinary professor) stated, that in 1806, along with Dupuytren, he had extirpated the superior cervical ganglions of the sympathetic nerve in the horse. The result of the experiment was redness, with infiltration, and swelling of the ocular and palpebral conjunctiva, and diminution of the volume of the globe of the eye. The horse was killed four months afterwards, and the ends of the nerve were found rounded and swollen. The sympathetic nerve is evidently insensible. When the branches of the fifth pair are cut or lacerated, a horse shrieks with pain, whereas nothing of the kind occurs when the sympathetic is divided. M. Dupuy repeated the experiment seven times, and each time with the same results.—*London Lancet*.

On the Use of the Thymus Gland.—Dr. Picci, after glancing at the theories of his predecessors, suggests that the use of this Gland is chiefly of a mechanical nature; viz. to occupy a certain space within the thoracic cavity, while the lungs remain unexpanded in the fœtus; and thus to prevent the ribs and sternum from falling in too much upon these vital organs. The size of the Thymus is inversely as the volume of the lungs; and, when the latter become dilated after birth by the admission of air into their cells, the former immediately begins to shrink and become atrophied. In truth, it is only in the adult that the thoracic parietes are moulded completely upon the lungs; for, in infancy and youth, it is rather the Thymus gland that is, in their place, moulded upon the thorax.

The situation of this gland in the anterior mediastinum and along the median line, the very nature of its tissue, and the greater expansion and development of its inferior half, are adduced as arguments in favour of the opinion now adduced. Besides the well-known circumstance that, in those new-born children in whom the thorax is very largely developed, the Thymus continues to increase gradually even to the end of the second year, it deserves notice that all those animals, in which the lungs are similar to those in the human subject, are provided with this gland; whereas, we find it to be entirely want-

ing in those which breathe by Branchiæ or membranous lungs. In hibernating animals, also, the Thymus exhibits alternations of enlargement and decrease, according to the state of the respiratory organs. In the Amphibia it attains its maximum of development.

The circumstance too of the gland being usually rather larger than ordinary in phthisical patients may be mentioned as lending some probability to the view we have proposed.—*Annali Universali. Med. Chirurg. Review.*

Croton Oil Plaster.—M. Bouchardat recommends the following method of preparing croton oil plaster. Melt eighty parts of gum diachylon plaster at a very gentle fire, and, when it is semi-liquid, mix with it twenty parts of croton oil. The plaster which results is to be spread thickly on muslin. It will produce considerable irritation of the skin, and may be employed in all cases where revulsives are required. It does not cause such severe pain as many other counter-irritants; and it may be applied over an extensive surface, so that a derivative action may be established proportional to the irritation which is to be combated,—an indispensable condition in the employment of these heroic remedies. M. Bouchardat is fully of opinion that the croton oil plaster will be found available in the treatment of many chronic diseases, both of the respiratory apparatus, and of the abdominal viscera.—*Annuaire de Thérapeutique. American Journal Medical Sciences.*

MEDICAL INTELLIGENCE.

Extract of a Letter from Professor MEANS, to the Editors:

CASTOR OIL, MANUFACTURED IN GEORGIA.—While the great staple of the South has become a drug upon the markets of the world, and its extensive cultivation is discouraged by the consequent reduction in price, the public mind has been fortunately constrained to direct its attention to other ample and, hitherto, unappreciated facilities, completely within its reach—furnished by our bold and effective water-falls, diversified soil, and delightful variety of climate, and promising equal usefulness, and a better remuneration for an equivalent outlay of labor and expense.

Actuated, as we suppose, with these views, our worthy and enterprising friend Mr. Joshua Willis, of Troup county, Ga., has abandoned the cultivation of Cotton, and most successfully commenced the growth of the *Ricinus Communis*, or Palma Christi (the Castor Oil Plant.) During the past year, he manufactured about 1500 gallons of oil, which were mostly (we believe) purchased by the druggists and physicians of Columbus, and the circumjacent country.

We were favored with a specimen of the article referred to, and cannot but regard it as a fair and beautiful oil—almost destitute of color, or smell, and with as little of the unpleasant flavor, peculiar to the Castor Oil Bean, as is consistent with an unadulterated preparation—Clear, bland, free from rancidity, and without any foreign admixture, it constitutes an admirable article for domestic use, and in *our* hands, manifested mildly, but effectively, its cathartic property. The East Indies have heretofore furnished probably seven-eighths of all the oil consumed in England, but for the last several years, American Oil, derived chiefly from the British Colonies and the Western States, has been ex-

ported to that country, to the amount of perhaps, from fifty to eighty thousand pounds annually. The latter article, though confessedly of fine quality, and possessing a flavor superior to the East India Oil, has yet been regarded as objectionable on account of the deposit (in cold weather) of a white, flaky matter, which some have supposed to be Margarine—a fatty salt, consisting of the two proximate constituents, Margaritic Acid and Glycerine. Others have supposed it to be the result of adulteration from Olive Oil, which is known, at low temperatures, to deposit what Pelouze and Soulet regard the Margarate and Oleate of Glyceril (the Hydrated Oxide of Glycerine)—an unlikely supposition however, in our estimation, as most of the latter oil is imported into this country from the south of Europe, and at too high a price to warrant the fraud of admixture with the Castor Oil designed for exportation.

We are rather inclined to the belief that such deposits, so frequently found in the American article, is from the liberal admixture of *animal* oil (Adeps Suillus) which does not sustain its fluidity under from $78^{\circ} 5'$ to $87^{\circ} 5'$. This may, perhaps, account for the rancid and acrid nature of some of the Castor Oil of Commerce, as the Oleine of the Lard, readily becomes rancid, i. e. acquires a disagreeable odor, and acid properties, by exposure to the Oxygen of the atmosphere. Indeed the deposit of Margarine, from Castor Oil, if any, should be exceedingly small, as not more than .002 of the entire products of saponification, consist of Margaritic Acid.

The oil manufactured by Mr. Willis, we believe, fully sustains the truth of this latter remark, and as a specimen of Southern enterprise, alike honorable to his skill and industry, commends itself to public confidence and popular use. Mr. W. will be prepared to execute large orders this fall and winter, and assures us that "it shall not cost more to druggists or other purchasers, whom he may supply, than the best article does from any other quarter," and all he asks is, that, other things being equal, *home manufacture* may have the preference.

A. MEANS.

Medical College of Georgia.—The Annual Commencement of this Institution was held in the Masonic Hall, on Tuesday, the 4th day of March, when the degree of M. D. was conferred upon the following gentlemen:—

Milton Antony, of Georgia—*Thesis on Aneurism.*

A. F. Anderson,	S. C.	Circulation of the Blood.
A. R. Bexley,	Geo.	Congestive Fever.
J. M. Bowers,	"	Prolapsus Uteri.
S. R. Caver,	Ala.	Gonorrhœa.
G. M. Cade,	Geo.	Secale Cornutum.
W. L. Cochran,	S. C.	The Liver.
W. E. M. Cousins,	Fla.	Rheumatism.
W. H. Davis,	S. C.	Intermittent Fever.
W. H. Ellington,	Ala.	Quinine.
T. B. Gordon,	Geo.	Hypochondriasis.
J. M. Galphin,	S. C.	Circulation of the Blood.
Thos. Graves,	"	Cynanche Trachealis.
J. S. Holliday,	Geo.	Dysentery.
J. A. Harlow,	"	Intermittent Fever.
A. L. Hammond,	"	The Blood.
James Hill,	S. C.	Prolapsus Uteri.
Taliaferro Jones,	Geo.	Pneumonia.
A. H. Jackson,	"	Prolapsus Uteri.
J. H. Jennings,	S. C.	Acute Rheumatism.
W. W. Leak,	Geo.	Modus Operandi of Medicines.
J. T. Lamar,	"	Rubeola.

Jesse Lowe,	"	Dysentery.
I. M. Moragne,	S. C.	Importance of Scientific Accoucheurs.
R. M. Parks,	Geo.	Healthy Menstruation.
H. W. Rutherford,	S. C.	Abortion.
J. P. Ralls,	Geo.	Scarlatina.
R. M. Stell,	"	Uterine Hemorrhage.
B. R. Strong,	Tenn.	Pathology of Fever.
E. A. Stribling,	Geo.	Phthisis Pulmonalis.
J. W. Todd,	"	Gastritis.
T. A. Wakefield,	S. C.	Signs of Pregnancy.
F. B. Wakefield,	Geo.	Congestive Fever.

Medical College of the State of South Carolina.—This Institution has conferred the degree of M. D. on seventy-four gentlemen: of whom, six were from Georgia—nine from Alabama—two from Mississippi—one from Florida—five from North Carolina—and the remaining fifty-one from South Carolina.

We are highly gratified to learn that Prof. CHARLES A. LEE has assumed the Editorial management of that valuable periodical, the *New York Journal of Medicine*. We know no one better calculated to occupy the post and become the successor of the indefatigable and lamented FORRY.

METEOROLOGICAL OBSERVATIONS, for February, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west. W.

Day.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	7, A. M.	3, P. M.	7, A. M.	3, P. M.		
1	29	51	30 inch.	29 9-10	N. E.	Variable.
2	31	58	29 9-10	30	N. E.	Fair.
3	31	45	30	29 9-10	E.	Cloudy.
4	50	47	29 4-10	29 4-10	N. W.	Rain 7-10 inch—high wind.
5	28	42	29 5-10	29 7-10	N. W.	High wind night and day.
6	28	51	29 8-10	29 9-10	N. W.	Fair.
7	28	47	30	30 1-10	E.	Cloudy.
8	30	62	30 1-10	29 9-10	W.	Fair.
9	31	60	30	30	W.	Fair.
10	32	66	30	30	W.	Fair.
11	39	73	29 8-10	29 8-10	S. W.	Fair.
12	48	76	29 7-10	29 7-10	S. W.	Fair.
13	49	80	29 7-10	29 7-10	S. W.	Fair.
14	49	52	29 9-10	29 9-10	E.	Cloudy.
15	54	60	29 8-10	29 8-10	variable.	Rain 3-10 inch.
16	35	57	29 8-10	29 9-10	W.	Fair.
17	38	70	29 9-10	29 8-10	S. W.	Fair.
18	40	69	29 8-10	29 8-10	S. W.	Fair.
19	40	72	29 8-10	29 8-10	S. W.	Fair.
20	45	70	29 8-10	29 8-10	S. E.	Fair.
21	50	75	29 8-10	29 8-10	S. E.	Fair.
22	66	74	29 8-10	29 8-10	S.	Cloudy.
23	59	62	29 7-10	29 6-10	S.	Rain 1 inch 5-10
24	44	68	29 7-10	29 7-10	W.	Fair.
25	40	68	29 7-10	29 8-10	W.	Fair.
26	39	70	29 7-10	29 7-10	W.	Fair.
27	38	59	29 6-10	29 5-10	N. W.	Fair—high wind.
28	33	59	29 8-10	29 8-10	N. W.	Fair.

Quantity of Rain 2 1-2 inches. 19 Fair days.

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Vol. I.]

NEW SERIES.—MAY, 1845.

[No. 5.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

A Case exhibiting the good effects of Opiates in large doses in preventing Abortion. By HENRY S. LEVERT, M. D., of Mobile, Alabama.

Mrs. ———, aged 24 years, was married early in April, 1842: she was of delicate constitution, subject to frequent attacks of syncope, and for several years previously had suffered from severe pulmonary hemorrhage, unattended with cough or other symptoms indicating disease of the lungs. Her habit was constipated, having a discharge from the bowels, upon an average, once in six days.

On the 20th May, next after her marriage, she aborted. This was attributed to a slight accident, the overturning of the chair upon which she was sitting. Eight or ten weeks from this time a similar accident occurred, and in both instances the effect was so prompt that no treatment was or could be resorted to, to prevent the miscarriage. It was now observed that her general health began to decline rapidly. The hemorrhages were more frequent and alarming—syncope of almost daily occurrence, and a slight cough added to her other symptoms, whenever she was exposed even in the slightest degree to dampness or the night air. About the expiration of the second month, after the last abortion, she supposed herself to be again pregnant, and fearing a similar accident, she consulted a medical gentleman, who advised her to watch her symptoms carefully, and, if possible, prevent a recurrence of the abortion. To do this, she was

directed to take opium in some form, and in doses sufficiently large to allay all pain. The opium was prescribed for each and every paroxysm of pain. Up to this period she had never taken opium in any form. As in the former instances, a few weeks only had elapsed, when she was again threatened, having pain and hemorrhage—with this difference, however—in this instance she had received no injury or shock, as in the two former cases. The fourth of a gr. of the sulphate morph. was promptly administered, which gave immediate relief, checking the pain and hemorrhage at once. This occurred again and again at intervals of a few days, and always yielded to the same treatment; small doses of the sulph. morph. During one of these attacks, which was much more violent than usual, aggravated as it was supposed by mental suffering, she was attacked with convulsions for the first time; and so severe were these convulsions, that upon three different occasions, during one night, her shoulder was dislocated. This was each time reduced as soon as the paroxysm passed off. She took at intervals of one hour 60 drops of laudanum during the night, making in all 480 drops. Towards morning she grew better, and the attack finally passed off without abortion. As she advanced in her pregnancy, it was found necessary to increase the quantity of opium before the desired effect could be produced, each trifle causing an attack every two or three days. "When she was about six months gone," says her husband, "she had a severe fall upon her face—on the instant I did not hesitate to give her a much larger quantity of opium than she had ever before taken, for I knew that her pains would soon be very hard. I think I gave her 150 drops on this occasion, and repeated the laudanum in smaller quantities, say 75 drops, every hour for five successive hours: in addition to which I bled her." After a great deal of suffering the pains were moderated, but she was never entirely free from pain until after her accouchment; nor was she again able to leave her bed until after that period. Opium was given daily, in doses gradually increased during the whole period of her gestation. She had frequent attacks of convulsions, similar in every respect to those first mentioned, which, when violent, were always relieved by bleeding in conjunction with opiates. Her bowels, as may be supposed, were obstinately constipated during the whole of this time—never having an evacuation unless some artificial means were resorted to.

At the expiration of nine months she was delivered of a healthy, full grown son, after a protracted labour of 14 hours, during which

time she had several severe puerperal convulsions. No opium was given after it was ascertained that she was in labour, nor was she bled. Immediately after her delivery, she began to diminish the doses of opium, and at the end of five weeks abandoned its use altogether, although she suffered much from its discontinuance.

In October following she again aborted, and again in January, and so suddenly on each occasion that there was no time to put her on treatment.

In the spring following, (1844,) she again became pregnant. As soon as this was satisfactorily ascertained, every precaution was adopted to prevent abortion. But a short time elapsed before she complained of pain, &c., and recourse was had immediately to opium. The same success attended its administration in this, as in the former instance. The only difference observable in this and the former pregnancy, was the more frequent recurrence of the paroxysms of pain and their greater severity. It was not unfrequent for her pains to last 24 hours, returning at intervals of five minutes; and so violent were they as to induce her attendants to believe that abortion would certainly be the result. Twelve or fifteen grains of crude opium would be given during one of the paroxysms before relief could be obtained.

About the fifth month these attacks came on periodically each morning at the same hour, and again in the evening. They were always subdued, by giving grs. x. of opium at one dose as soon as they were felt, both in the morning and at night. The opium about or a little after this time was laid aside, and the sulph. morph. used in its stead. Of this latter article she took daily grs. iii. at two doses. It was soon ascertained that this dose did not suffice, and it was gradually increased, until she took the enormous quantity of grs. ix. twice a day regularly, and frequently three times a day, until her confinement.

At 4 o'clock on the morning of the 12th February, (1845,) she felt more pain than usual, or rather than it was usual for her to have at that period of the 24 hours, and she took her accustomed portion (grs. ix.) of morphine, although it was four hours in advance of the hour when she had been accustomed to take it. This procured no relief, but on the contrary seemed to increase her suffering. I was invited to visit her at 8 o'clock on the same morning, and found her suffering a good deal from inefficient uterine pains. An examination satisfied me that labour had commenced. The os uteri being

slightly dilated and yielding, but the pains were too inefficient to effect the delivery. I came to the conclusion that, in consequence of the large dose of morphine which she had taken four hours previously, the pains had been subdued, and that after its impression had passed off the uterine action would increase, the pains become more efficient, and that the labour would be terminated favorably. I left her, therefore, with directions to take no more morphine, but to wait patiently for the effect produced by that already taken to wear off. At 4 o'clock in the afternoon I called again: her condition was pretty much as it was at my first visit in the morning—pains, perhaps not quite so violent, and the pulse more feeble. The os uteri being soft and yielding, I determined to give the ergot, and accordingly gave her grs. x., and repeated it at intervals of 15 or 20 minutes, until she took 3jj. Not the slightest effect seemed to be produced by it. The pains were not increased, the pulse became more and more feeble, great jactitation, with sighing, &c., supervened, and I almost despaired of conducting the case to a favorable issue. Believing, however, that much of the restlessness, the feeble pulse, &c., resulted from the want of her accustomed stimulus, the morphine, and seeing that no good was to be expected from a continuance of the ergot, I determined to suspend the latter, and give her a decided dose of morphine. If it produced no good effect, it could only suspend the uterine pains for a few hours, and I should find her, after the impression of the anodyne had passed off, in the same situation that she now was. I accordingly gave her grs. vii. of morphine at one dose. She took the morph. at 7½ o'clock, P. M. In 20 minutes her pulse became fuller and firmer, the restlessness materially abated, and the pains much more decided in their character. She continued to have pretty good pains until 10½ o'clock, when they ceased almost altogether. At this time I gave her another, though smaller dose, of morphine; and in half an hour she was delivered, by a single pain, of a healthy, full-grown son.

Nothing unusual has occurred since. She is now quite as well as other women after parturition—nurses her child and enjoys *more than her accustomed health*.

Some four or five days after her delivery, I directed the morphine to be reduced ¼ gr. at each exhibition making a ½ gr. daily. It is now reduced to one grain daily, and in the course of a few days more, she will have abandoned its use altogether.

This case is interesting in more particulars than one—1st, the im-

mense doses of morphine which it became necessary to administer, to prevent abortion—2nd, the entire success with which it was given in this and her previous pregnancy—3d, the facility with which she has been enabled to abandon its use after each delivery—lastly, the non control which the morphine exercised over *natural labour pains*. In fact, its effects was indirectly that of the ergot of rye: by stimulating the system to that point which from long habit had become second nature, the uterus was enabled to perform its functions properly. My conviction is, that had not this remedy been employed, the labour, to say the least of it, would not have been terminated so soon; if indeed she could have been delivered at all.

ARTICLE II.

Cough and Pleurodynia from Spinal Irritation. By J. J. ROBERTSON, M. D., of Washington, Ga.

Whether we regard spinal irritation as an idiopathic affection, or as a result from derangements in other organs exhibiting itself in this disorder, in the great nervous centre of reflex action, we must admit, that there are few diseases in which a proper appreciation of cause and effect is of more importance in a practical point of view.

The various and complicated symptoms of an irritation of the medulla spinalis, simulate in their character, so nearly inflammations of other important organs, that were we to omit a manual examination of the spinal column, in connection with the consideration of other symptoms, we would be subject to frequent error in diagnosis, and consequent injudicious application of our therapeutic agents. There are many affections, which were formerly regarded as inflammations or derangements of organs, remote from the spinal marrow, which, by more modern pathology, are clearly referable to an irritation in some portion of this organ; and notwithstanding, there are so many recorded facts, the result of careful investigation, which should impress upon us the importance of an examination of the spinal column in many diseases, yet there are a number of practitioners, who

either from an ignorance of the important pathological relations of the medulla spinalis, or from a tenacious adherence to some favorite doctrine, altogether reject such an examination, and regard it only, as "an empirical demonstration, or, at least, an insane manœuvre." How they can satisfactorily and successfully treat many diseases which every one meets with, in a general practice, we are at a loss to divine. For ourselves, we should be subject to many frequent and perplexing difficulties, which otherwise are rendered comparatively clear. We do not contend, that a manual examination of the spinal column will in *every instance* give evidence of an irritation of that organ, when such irritation really exists, but we maintain, that in a large majority of cases, such a result will be found to follow. We do not wish to be classed among those, who without due consideration, are led off by every "wind of doctrine," for we deprecate the course of those who from an ardent zeal, or a morbid thirst for something new, precipitately adopt every new theory and doctrine, and generalize from isolated facts; yet, as is justly, and forcibly said by an able writer, "a too obstinate and inflexible adherence to doctrines because they bear the impress of age, would as certainly retard the progress of true philosophy, as that laxness of reason that would allow every induction of sense, to be counted of equal weight with the most obvious and practical truths."

Our attention was more particularly directed to the importance of this subject by the able Professor of the Theory and Practice of Medicine, in the Medical College of Georgia, who at that time seemed to have advanced further in his investigations of this subject, than any, with whose researches we were acquainted. His pathology of Intermittent and Remittent Fevers, as recorded in the Southern Medical and Surgical Journal, for 1836, as well as his more recent article on the Pathology of Intermittent Fever, to be found in the first No. of the New Series of the same Journal, are worthy of a careful perusal, as having an application of this important doctrine, which of late, has become one of increasing interest and investigation. We would also refer the reader to an interesting article contained in the fourteenth No., seventh volume, of the American Journal, by Austin Flint, M. D., of New-York, in which are collected a number of cases, exhibiting a diversity of distressing and alarming symptoms, all of which were referred to this common source, the treatment regulated accordingly, and the diagnosis fully and successfully sustained by the result.

Notwithstanding we have used the term "Spinal Irritation," which

in its common acceptation conveys the idea of the derangement to which we allude, yet it must be obvious that it is objectionable; for the true nature of the derangement, we must admit, in the present state of our knowledge, we cannot accurately determine. Various are the opinions respecting it; and perhaps the appellation which now distinguishes it, is the least objectionable, until future investigations shall have determined its true character. We are disposed to regard it, as a *local, venous congestion*. The peculiar anatomical arrangement of the vessels on the surface of the cord, as well as the fact which appears to have been demonstrated, that the spinal vessels are destitute of valves, and consequently have to perform their functions in opposition to the force of gravity, without the aid of these valuable auxiliaries, thereby rendering the blood exceedingly liable to be obstructed in its ascending course,—even by slight and trivial causes: the fact of the suddenness of its invasion in most cases, and also that the remedial agents that usually give speedy relief, are of a character calculated to relieve this state of things;—all combine to favor this conclusion. We can readily conceive, how such a congestion can produce neuralgia, together with all the evidences of a deranged innervation. Various other reasons might be adduced in support of this opinion; but as it is not our purpose in this place to discuss the nature of a disorder that is involved in so much doubt,—and as we have already extended this portion of the article to a greater length than originally designed,—we proceed to transcribe the following particulars of a case which we find recorded in our note book.

We were summoned to see Mrs. J. at 5 o'clock, A. M., on 29th April, 1844. She was aged 23, and her health generally good previous to her present indisposition. We received from her the following history of her case: Her digestive organs had been somewhat deranged for three weeks past; two weeks previously she was attacked with pain in left side, of an intermittent character; a few days subsequent there came on a harsh cough, unaccompanied with expectoration; the cough recurred during the day in paroxysms at irregular intervals, which aggravated the pain in the side; she thought she had taken cold, and used the ordinary domestic remedies with no permanent amendment. Some days previous to our visit, she was advised to apply a blister over the seat of pain, with which we furnished her, having made no examination of her condition. The blister gave but transient relief; the symptoms recurred, and

gradually increased until some time during the night previous to our visit they became suddenly greatly aggravated. We found her condition as follows:—Pain in the left side, constant and intolerable—cough recurring in paroxysms, at intervals of about an hour, which aggravated the pleuralgia; dyspnoea very great; inability to keep the recumbent posture, which seemed to increase the dyspnoea, and favor the return of cough; pain aggravated by every deep inspiration; pulse one hundred, small and soft; skin of a natural temperature; tongue, coated with long white fur. We had no stethoscope at hand, and consequently made no auscultatory exploration of the chest, nor did we deem such investigation necessary at the time; because, from the history of the case, as well as from the slight constitutional derangement, we were not disposed to regard it of an inflammatory character. We proposed an examination of the spinal column; when she informed us that she had *no uneasiness whatever in that region*, but she submitted to the examination. We proceeded to examine each separate vertebrae in the usual manner, without giving any uneasiness, until we reached the last cervical, which was found exquisitely tender on slight pressure; and in proceeding downwards, we found the first five dorsal equally so; but there was no indication of derangement in any other portion. The result of this examination, together with the history of the case, afforded strong presumptive evidence that the present distressing symptoms were mainly, if not entirely referable to an irritation of the medulla spinalis. We immediately ordered half gr. of acet. morph. to be given immediately, and applied caustic ammonia to the diseased portion of the spine, which produced vesication in a few minutes. In half an hour she was somewhat easier. We gave another portion of morphine, placed her in a recumbent posture, and directed one-third of a grain of morphine to be given every half hour until relief should be obtained.

At 1 o'clock, P. M., she was much easier than when we left her; has taken during our absence two portions of morphine; can keep the recumbent posture without aggravating the symptoms: dyspnoea, greatly relieved, but still troublesome; intervals between the paroxysms of cough much longer, and the cough unaccompanied with the distress previously produced. We gave morphine one-third of a grain, and directed the vesicated portion of the spine to be rubbed with tart. ant. et pot. ointment, twice a day, until pustulation should take place. ●

At 7 o'clock, P. M., the pleurödynia was but slight, and of an intermittent character; the cough not very troublesome; the dyspnœa entirely relieved; the pulse ninety, rather fuller, but soft: she had a comfortable sleep of half an hour, since our last visit, and feels disposed to sleep. We gave the following pills, and left her for the night:

R. Ext. Colocynth, comp. . . . x ij. grs.

Blue Mass v "

Ext. Hyoscyami, iij. "

Mix, and divide into four pills.

On the 30th, at 8 o'clock, A. M., she was much better than last evening; had slept some during the night; had coughed several times since our last visit, which somewhat increased the pain in the side; pulse and skin natural; tongue cleaning. The pills had purged twice this morning. We left one-third of a grain of morphine, to be given in two hours.

At 5 o'clock, P. . ., we found her entirely relieved of her primary symptoms, except an occasional cough, which was but slight; she complained of her back from the effects of the ointment. We left one-third of a grain of morphine, to be given should the pain in the side return, or the cough become troublesome.

May 1st, 8 o'clock, A. M. She expresses herself as entirely relieved. She had slept some during the night, and thinks she would have slept all night, had not the pain in her back been troublesome, though the morphine left yesterday was not taken. We found a fine crop of pustules on the part rubbed with the ointment. It was ordered to be discontinued, and an emolient poultice applied to the back, to be followed with dressings of olive oil. As there was no operation from the bowels since yesterday, we ordered a dose of the same pills as on 29th.

On the 2nd May, at 10 o'clock, A. M., we found her sitting up. She says she feels quite comfortable; had rested well during the night; the pills given on yesterday produced three evacuations by bed-time, and one this morning; the pustules discharging freely; no cough or pain, tongue cleaning, pulse and skin natural.

She was now placed upon a course of the Susq. Oxid. Ferri, to be continued regularly; the bowels to be kept soluble by mild laxatives, and her diet to be unirritating, but nutritious. This course she pursued with progressive amendment for three weeks; at the expiration of which time, she discontinued the use of all remedial agents, her health being entirely restored.

We were again called to see her July 4th, 10 o'clock, A. M., when we found her suffering from pleurodynia of an intermittent character in the left side. She stated that her digestive organs had again become deranged from an imprudence in diet. Upon examination, the four first dorsal vertebræ were found to be tender on pressure, and although we regarded the pain, &c., as purely neuralgic, yet, from an undue determination to the brain, a few ounces of blood were extracted before we ventured on the use of anodynes. The venesection gave little or no relief to the pain in the side. We applied sinapsisms to the spine—gave a dose of pills, the same as in the previous attack, only substituting ten grains of the submuriate of mercury for the mass.

We saw her again at 8 o'clock, P. M., when the pills had operated several times, entirely relieving the cerebral symptoms. The pain in the side still occurred at intervals. We gave a quarter of a grain of morphine, to be repeated every hour until relief was obtained.

On the next morning she had taken two portions of morphine, with entire relief; had rested well during the night, and now feels quite comfortable. The same general course was directed as before, and was attended with the same happy results. She has since continued in good health, with the exception of a slight attack of gastralgia in January last, which readily yielded to appropriate treatment.

The foregoing case has been selected from others before us, as possessing peculiar interest, from the exhibition of symptoms analogous to those usually presented in phlegmasia of the respiratory organs, but which have their origin, for the most part, if not entirely, in a lesion of the spinal marrow.

In the treatment of this case, we made liberal use of anodynes, although we believe they can exert no other than a temporary influence, while the derangement of the spine exists; still we always administer them in urgent cases of this character, when there is nothing to contra-indicate the employment. Although we believe that the pain, &c., may be relieved by applications to the spine alone, yet, when this lesion in the spinal marrow has existed for some time, the applications which produce vesication immediately, or even, the local abstraction of blood, will not always afford immediate and entire relief; and it is not until we establish a more decided and permanent revulsion, that the symptoms altogether subside: hence, the necessity of administering opiates in such cases, to give some relief to the

urgent symptoms, and allow time for the establishment of a decided revulsion. We have seen cases, that had existed for some time, which resisted all topical applications until a discharge of pus was established by tartar emetic ointment. It may be objected, that this is contrary to our reasoning in proof of its being a *local congestion*. But not so; for as in the case just related, we believe the derangement to have been *primarily* a simple congestion; but having existed for some time prior to our examination, it had assumed a new and more permanent character. Had we seen our patient in the onset of the derangement, doubtless the first application made to the spine would have proved adequate to the entire relief of the then existing symptoms. This fact we have verified in a number of cases; and when the neuralgic symptoms are not urgent, we always procure relief from topical applications to the spine.

It would appear from the history of this case, that the spinal irritation was symptomatic, from the fact that the pleurodynia, &c., did not occur, until after the digestive organs had become deranged. We, however, had no opportunity of examining the spinal column, prior to the development of the urgent symptoms. The derangement may have existed, and produced the indigestion, and subsequently, the cough and pleuralgia; but we are not disposed to think so, from the fact that the patient could trace the disorder of the digestive organs to improper ingesta. Yet we do not believe, that a correction of this disorder would have relieved the neuralgia, &c.; for there was a lesion in the spinal marrow, which required a distinct treatment.

My friend, Dr. E. Lamar, of Lincolnton, has kindly offered to furnish me with some interesting cases of spinal irritation, which manifested itself in painful affections of remote organs, and was relieved by treatment directed particularly to the spine. These, together with others that have come under our personal observation, we may report in some future number of this Journal.

ARTICLE III.

Remarks on a Lecture on Mesmerism, published in the 4th No. of the Southern Medical and Surgical Journal. By L. A. DUGAS, M. D., Professor of Physiology, &c. in the Medical College of Georgia.

The Lecture on Mesmerism, by my esteemed friend and colleague, Prof. P. F. Eve, inserted in the last number of the Southern Medical and Surgical Journal, being evidently designed to lessen the value that may be attached to Mesmerism as a means of diminishing or preventing pain during the performance of surgical operations, and having a tendency to invalidate the testimony I have borne of its efficacy in the case published by myself in the 3d number of the same journal, I trust it will not be deemed inappropriate that I examine the grounds on which rests the defence of the positions assumed in the lecture. And, before going any farther, I must assure the reader, in the language of my colleague, that "in examining the subject, I hope to do so as a medical philosopher, to offend none who may not share my own opinions, to violate in no instance propriety or courtesy," and to ask nothing more than "a fair hearing and an impartial judgment." Differences of opinion in matters of scientific enquiry, when discussed in this spirit, can certainly lead to no unpleasantness, and must redound to the benefit of all parties.

Prof. Eve endeavors to establish the three following propositions:

"1st, That Mesmerism, or animal magnetism, was unanimously condemned by the commission appointed in 1784 by the King of France to examine and report upon it; and that it has never received any favor or approbation from any scientific or learned society whatever.

"2d, That Mesmerism is not a reality; but that the phenomena ascribed to it, are justly due to the imagination and excited feelings.

"3d, That the non-expression of pain, is no proof of its non-existence, and that there are conditions of the body and mind, in which no suffering is evinced, and moreover, that this state of the system is independent of Mesmerism."

Now let us see how these propositions are sustained. It is stated distinctly in the first proposition, that Mesmerism was *unanimously* condemned by the French committee; yet, as soon as the details

of the Report are given, we find the statement that "the report was confirmed by every member of the commission, *except one*, M. Jussieu." "He was however, but one, out of fourteen." Was the report then *unanimously* confirmed? The names of Franklin, Bailly and Lavoisier, also are heralded as "inseparable from the annals of science." Why omit that of Jussieu, who was confessedly one of the most distinguished naturalists of the age? Is it because he was so indiscreet as to differ in opinion with them on the subject of Mesmerism? In the paragraph, page 171, we find the following quotation from their Report: "We cannot prevent ourselves from recognizing in these constant effects a powerful agent, which acts up on patients, subdues them, and of which the person who magnetizes them seems to be the depository." They recognize then the *facts*, as does Jussieu, and only differ with regard to their *explanation*. They refer them to an operation of the mind—whereas Jussieu thinks they may be attributed to some other agent. Admit the facts, and I care not a whit for the explanation.

But I am really at a loss to perceive what bearing the decision of that committee can have on Mesmerism, as at present understood and practiced. The following extract from the Report of the majority, will show the process and phenomena upon which they were called to decide:

"They saw in the centre of a large apartment, a circular box, made of oak, and raised a foot or a foot and a half from the floor, and called the tub, (*baquet*.) The cover of this box is pierced with a number of holes, through which pass bent and movable bars of iron. The patients are placed in several rows around the tub, and to each is assigned one of the bars of iron, which may be applied directly to the region affected. A cord, passed around their bodies, connects them with one another; sometimes a second chain of communication is established by their hands, that is to say, by applying the thumb between the thumb and index finger of the next person, and compressing the thumb thus held. The impression received from the left, passes to the right, and thus round through the whole. In one corner of the chamber a piano is placed, upon which various airs are performed, and to which are added singing and other vocal sounds. All those who magnetize, hold in their hand an iron rod 10 or 12 inches long. This rod, which is the magnetic conductor, concentrates the fluid towards its point, by which the emanations are rendered stronger. The sound of the piano is also a conductor of magnetism. The patients, placed in very large numbers, and in several rows around the tub, therefore receive magnetism at the same time from all these sources; by the iron branches issuing from the

tub, by the cord encircling the body, by the union of thumbs, and by the sound of the piano. The patients are moreover directly magnetized by means of the finger and iron rod passed before the face, over or behind the head, and about the affected region ; but they are especially magnetized by the application of hands and by pressure of the hypochondriac and hypogastric regions, frequently continued for a long time, and occasionally for several hours."

The effects produced, are thus related by the Committee :

"In the experiments they (the committee) have witnessed, the patients, being thrown into various states, present quite a singular spectacle : some are calm, quiet, and experience nothing ; others cough, spit, feel slight pains, a local or general warmth, and perspire ; others are annoyed and agitated with convulsions. These convulsions are of extraordinary continuance and violence : as soon as convulsions occur in one, they are manifested in many others. The committee have seen them continue more than three hours : they are attended with the expectoration of a turbid and viscid fluid, forced up by the violence of contractions, and in which may sometimes be detected streaks of blood. They are characterized by rapid, involuntary movements of the limbs and whole body, by constriction of the throat, by tremors of the hypochondriac and epigastric regions, by confusion and wildness of the eyes, by piercing cries, weeping, hicough, and immoderate laughing ; they are preceded or followed by a state of languor or of reverie, a kind of prostration, and even sleep. The slightest unexpected noise occasions trembling, and it was observed that any change in the tone or time of the airs played on the piano, affected the patients, so that a brisk air was attended with increased agitation and more violent convulsions. Nothing is more surprising than this scene of convulsions ; one who has not seen it can form no idea of it, and, when witnessing it, one is equally astonished at the perfect tranquility of a portion of the patients, and at the agitation of the others, at the variety and repetition of the phenomena, at the sympathies established. Some of the patients seek each other, rush together, smile, converse affectionately, and endeavor to soothe each other's feelings. All are under subjection to the magnetizer ; however drowsy, a word, a look, or a sign from him, arouses them. We cannot but recognize in these constant effects a powerful influence which acts upon the patients, subdues them, and of which the person who magnetizes them seems to be the depository."

How different are these procedures and effects from those of the present day ! Instead of a charlatanical and ostentatious display of causes and effects, the philosophic inquirer proceeds, without extraneous paraphernalia, to the investigation of nature's truths. With perfect quiet around him, and nothing calculated to strike the ima-

gination, he uses but his volition and a few passes of his hands along the person of his subject. Yet how much more astounding the effects thus simply produced, than even those related above! Even the production of mere somnambulism, now so common as to have been witnessed by every one who has taken the least trouble to investigate the matter, was entirely unknown at the date of the celebrated Report. With what point then can the authority of this committee be invoked in an argument to disprove that of which they could have had no idea whatever?

In the second division of the lecturer's first proposition it is asserted that Mesmerism "has never received any favor or approbation from any scientific or learned society whatever." My friend must have forgotten several facts rather adverse to such a conclusion. In 1815, the Emperor of Russia appointed a committee of able physicians to investigate the subject, who reported, that having ascertained that animal magnetism is a very important agent, they would recommend that its practice be restricted to enlightened physicians. An Imperial edict was accordingly promulgated to that effect. In 1816, a similar law was passed in Denmark, at the instance of the College of Health. In 1817, the King of Prussia, by Royal edict, prohibited the practice of animal magnetism by any other than physicians. And in 1818, the Academy of Sciences of Berlin, which is confessedly one of the ablest bodies in Europe, offered a prize of upwards of \$600, for the best work on animal magnetism, thus showing their belief of its importance.

In 1825, a committee was appointed by the Royal Academy of Medicine, of Paris, to report on the expediency of appointing a standing committee for the investigation of facts relating to animal magnetism. The committee, consisting of Adelon, Marc, Burdin aîné, Pariset, and Husson, reported that it *was* expedient to establish a committee on animal magnetism; and, on the question being taken, 35 voted in favor of the report, and 25 against it. The President then appointed the following gentlemen as that committee—viz: Leroux, Bourdois de la Motte, Double, Magendie, Guersent, Laennec, Thillaye, Marc, Itard, Fouquier, and Guéneau de Mussy. Laennec's health very soon became such as to necessitate his resignation, and M Husson was appointed in his place. During upwards of five years this able committee, with the exception of Magendie and Double, who would not serve, were engaged in the discharge of the duties assigned them, proceeding with the circumspection and impartiality

of true philosophers, in the observation and interpretation of facts. In June, 1831, their Report was read to the Academy, and concludes with the following corollaries :

1. The means employed to establish relation, or, in other words, to transmit the magnetic influences of the operator to the magnetized, are the contact of thumbs or hands, frictions, and certain gestures made near the body, called passes.

2. The external and visible means are not always necessary, for on several occasions, the will, or the eyes fixed on the patient, have produced the magnetic effects, even without the knowledge of the magnetized.

3. Magnetism has acted on persons of different sexes and ages.

4. The time required to produce the magnetic effects varies from half an hour to one minute.

5. Magnetism does not usually affect persons in good health.

6. It does not affect all sick persons.

7. During the process of magnetizing, there are sometimes manifested insignificant and transitory effects, which we do not attribute to magnetism alone, such as slight oppression, heat or cold, and other nervous phenomena which may be accounted for without the intervention of any special agent ; viz. by hope or apprehension, by prepossession or the expectation of something unknown and novel, by the ennui resulting from monotonous gestures, by the silence and quiet attending such experiments, and by imagination which exerts such powerful influence on certain minds and constitutions.

8. A number of the phenomena observed have appeared to us to depend on magnetism alone, and were not reproduced without it. They are well established physiological and therapeutic phenomena.

9. The true effects of magnetism are various : It agitates some, and composes others ; it causes most commonly temporary acceleration of respiration and circulation, slight convulsive actions of the muscular fibres resembling electric shocks, more or less numbness, drowsiness, sleep, and in a few cases what magnetizers term *somnambulism*.

10. The existence of a uniform feature by which the truth of this *somnambulism* can be determined, has not been established.

11. Nevertheless the existence of this state may be certainly known, when it occasions the development of the new faculties denominated *clairvoyance*, *intuition*, *internal prevision*, or that it produces striking physiological changes, as *insensibility*, a *sudden and considerable increase of muscular power*, and when this state cannot be referred to any other cause.

12. Inasmuch as some of the effects attributed to *somnambulism*, may be simulated, *somnambulism* itself may sometimes be simulated, and furnish charlatanism with means of deception.

13. The sleep induced more or less promptly, and more or less profoundly, is a true effect of magnetism, although not an invariable one.

14. It is demonstrated to us that it has been induced under circumstances in which the magnetized could not see and were ignorant of the means employed to produce it.

15. When the magnetic sleep has been once induced, it is not always necessary to resort to contact and to passes to induce it again. The look and will alone of the magnetizer have the same influence. Not only an effect may then be produced on the magnetized, but complete somnambulism may be induced, and removed without his knowledge, beyond his sight, at a certain distance, and beyond closed doors.

16. There are usually effected changes more or less remarkable in the perceptions and faculties of individuals thrown into somnambulism by magnetism.

A. Some of them, in the midst of noisy conversation, hear only the voice of the Mesmerizer ; many reply correctly to questions propounded by him or by those with whom they have been put in relation ; others will converse with any person present : yet it is rare that they hear what occurs about them. They are generally unconscious of external and unexpected sounds produced about their ears, such as the sound of brass vessels stricken near them, the fall of a piece of furniture, &c.

B. Their eyes are closed, and their eye-lids resist efforts made to separate them with the hands ; this operation, which is not done without pain, shows the globe of the eye convulsed, carried upwards, and sometimes downwards.

C. The sense of smell is sometimes abolished. Muriatic acid, or ammonia, may be inhaled without discomfort and even without their knowledge. The reverse sometimes obtains, and they are then sensible to odors.

D. Most of the somnambulists we have seen, were completely insensible. We might tickle their feet, nostrils, and the corners of their eyes with a feather, pinch their skin so as to produce echymosis, plunge suddenly and unexpectedly to a considerable depth a pin under the finger nails, without any indication of pain, and without their knowledge. Indeed one has been found insensible to one of the most painful surgical operations, whose countenance, pulse, and respiration, indicated no emotion whatever.*

17. Magnetism is equally intense and is as readily felt at a distance of six feet as at six inches, and the phenomena are the same in both cases.

18. It appears that those only who have been previously magnetized can be acted on at a distance.

19. We have seen no one in whom somnambulism was induced at the first sitting. In some cases eight or ten sittings were required.

20. We have always observed that natural sleep, which is the re-

*Cloquet's case.

pose of the organs of the senses, of the intellectual faculties, and of voluntary motion, precedes and terminates the state of somnambulism.

21. Whilst in the state of somnambulism, the magnetized whom we have seen, retain the exercise of their waking faculties. Their memory appears even more faithful and more extended, since they remember what occurred during every previous state of somnambulism.

22. When awake, they never to have forgotten entirely all the occurrences during their somnambulism, and never recollect them afterwards. On this subject our sole reliance must be on their veracity.

23. The muscular power of somnambulists is sometimes benumbed and paralysed. At other times their movements are merely impeded, and in walking they stagger as if intoxicated, avoiding or not obstacles in their way. There are somnambulists who retain complete, their powers of motion, and some of them are even stronger and more active than when awake.

24. We have seen two somnambulists distinguish, with closed eyes, objects placed before them; they designated, without touching them, the color and suit of cards; they read words in hand-writing, or several lines in books opened at random. These phenomena occurred even when their eye-lids were kept perfectly closed with our fingers.

25. We have met with two somnambulists who possessed the faculty of foreseeing (*prévoir*) acts of the organism more or less remote and more or less complex. One of them announced several days, nay, several months beforehand, the day, hour and minute of the recurrence of epileptic paroxysm; the other indicated the period at which he would be cured. Their predictions (*prévisions*) were realized with remarkable precision. This faculty seemed to us to be possessed only in relation to acts or lesions of the organism.

26. We have met with but one somnambulist who indicated the symptoms of the disease of three persons with whom she had been put in relation (*en rapport*). We had however made experiments on a pretty large number of them.

27. In order to establish with accuracy the relation of magnetism to therapeutics, it would be necessary to observe the effects on a great number of individuals, and to make for a long time daily experiments on the same patients. This not having been done, the committee confines itself to the statement of what it has seen, although in too small a number of cases to venture on any positive conclusion.

28. Some of the patients experienced no relief from magnetism; others have been more or less manifestly benefitted by it; for example: one was entirely relieved of habitual pains; another recovered his strength; a third had his epileptic attacks deferred several months; and a fourth was completely cured of a serious and long-standing paralysis.

29. Whether considered as an agent of physiological phenomena, or as a therapeutic means, Magnetism ought to be included among medical studies, and consequently its practice and supervision should be restricted to physicians, as is the case in the Northern countries.

30. The committee did not verify, for want of opportunity, other faculties which had been stated by magnetizers to exist in somnambulists. But they have collected and now communicate facts of sufficient importance to authorize them to think that the Academy ought to encourage researches on Magnetism, as a very curious branch of psychology and of natural history.

The Report was listened to by the Academy with much interest—received and ordered to be autographed, (*autographié*). Consisting as it did, of mere facts observed by the committee, it could give rise to no discussion without impeaching the veracity of those respectable men. Hence, although there were probably many members who still remained skeptics, as the Report was not objected to, it must be considered as in accordance with the views of the Academy, or at least of a majority of that body.

It is truly a matter of astonishment that, notwithstanding the general admission of the truths of Mesmerism in all the nations of continental Europe, and the action of their respective governments and scientific bodies on the subject, it should have attracted but little attention in England until a comparatively recent date. One would certainly suppose that a doctrine advocated in Germany by such men as Klugge, Sprengel, Treviranus, Weinhold, Hermstaedt, Meckel, Klaproth, Hufeland, Shiglitz, &c.; and in France, by La Place, Cuvier, Virey, Rostan, Orfila, Marc, Itard, Georget, Guersent, Husson, Fouquier, Andral, &c. was worthy of being at least listened to by the members of the Royal Medico-Chirurgical Society of London, even at as late a day as 1843! It should be remembered, however, that notwithstanding the indignity with which the great majority of this body treated the presentation of facts to them, there are yet some in England, who, rising above the influence of blind prejudices and the fear of popular odium, have candidly investigated the subject, and dared to proclaim their belief in Mesmerism. Among these, we find, Arnott, Oliver, Symes, Townshend, Elliotson, &c.—men whose abilities and standing entitle them certainly to as much consideration as the herd of opponents who “peremptorily dismissed Mesmerism from the society,” without ever having taken any steps to verify its claims. That Dr. Elliotson, who had long been regarded as one of the ablest professors in the London University, whose clinical Lectures and Hospital success had won him the applause of the Profession and patronage of the public, who had been for years the respected President of this very Medico-Chirurgical Society, that

such a man should be "ejected from his professorship," dismissed from his Hospital, and compelled to resign his membership of the society, merely because of "his belief in magnetism," are facts that so closely resemble the inquisitorial tyranny of the dark ages, that we can scarcely realize that they have occurred but yesterday, and in the Emporium of the civilized world!

It is said that the Professor of Philosophy at Padua refused to walk into Galileo's house and look through his telescope, to see whether the satellites of Jupiter really existed; and that the Professor at Pisa delivered lectures to show that the facts could not be facts. Verily it would seem that we are not so far in advance of the age of Galileo as we had thought, and that human nature is still the same now that it was centuries ago.—I hope, however, that for the honor of the age in which we live, I have sufficiently established that it is an error to suppose, that Mesmerism "has never received any favor or approbation from any scientific or learned society whatever," and that it has on the contrary been recognized by learned medical societies, legalized by governments, and advocated by a large number of the most scientific authorities of Europe. Fortunately for our country, we have no society constituted for the purpose of determining *ex auctoritate* what we may or may not believe. Hence it is that since the subject of Mesmerism has been agitated amongst us, it has received the attention, not only of scientific men, but of observers of all classes, who, unbiassed by the vain phantom of authority and high sounding titles, have examined for themselves and become convinced that Mesmerism is "a reality."

But my friend urges that the "phenomena ascribed to it (mesmerism) are justly due to the imagination and excited feelings," and that "the non-expression of pain, is no proof of its non-existence." The latter of these propositions is so self-evident that I am surprised that so much labor should have been spent in the collection of cases to substantiate it. I might have furnished a goodly number of the kind which have come under my own observation; but I would add, that Mrs. Clark is the only person I have ever seen, who not only *expressed* no pain, but honestly averred having *felt* no sensation whatever during the operation.

With regard to the first of the above propositions, I am happy to find that its phraseology contains no denial of the *phenomena* ascribed to Mesmerism, and that at page 183, my friend admits "that sleep, convulsive movements, *insensibility*, &c. may be produced, and have been

produced by one person operating on the feelings of another." True, in his *opinion*, they are the "legitimate results of the imagination," &c. No one will deny that the phenomena have, and will give rise to differences of *opinion* in relation to the channel through which they are induced, as well as to the agency by which they are occasioned. Whether it be through the mind that we operate on the body, or through the body that we operate on the mind, in the induction of mesmeric phenomena, are questions of minor importance in determining the great fact of our ability to place the body in such a state that a surgical operation may be borne without pain. Of what moment can it be to my patient, or even to her surgeon, that her insensibility be attributed to "a trance or reverie," or even to Mesmerism? Is it not to her a source of unspeakable thankfulness that a method has been discovered by which she has been spared the pangs of one of the most painful operations, and relieved from the presence of a loathsome disease without her consciousness, and as if by enchantment? And yet is she, and all who may be so unfortunate as to require surgical operations, to be told that this is all a farce, that it is the mere workings of imagination, and that, in the language of Dr. Copland of the Medico-Chirurgical Society of London, "*the fact is unworthy of consideration, because pain is a wise provision of nature, and patients ought to suffer pain while their surgeon is operating?*" or rather is it not more philosophic, whilst we may differ in opinion on points of theory, that we yield to the strength of facts, and endeavor, by multiplying them, so to perfect our means as to render them available to all sufferers, instead of being limited as at present to a favored few. That we cannot induce insensibility in all cases, is but too true; may we not indulge the hope, however, that by becoming more familiarized with this mysterious agency, and the laws by which it is governed, we may ultimately be enabled so to control it, as to render it of general applicability?

ARTICLE IV.

A Case of Lithotomy in the Female—double Calculus. By B. W. GROCE, M. D., of Talladega County, Ala.

During the month of April, 1843, I was called to visit Mrs. N. S. (aged 23 years, and of leuco-phlegmatic temperament,) in consultation with Dr. Sumners, for the purpose of removing stone in the bladder, by an operation. I found Mrs. S. in an extremely debilitated condition. She informed me that she had been suffering from the effects of the stone for several years. She had taken various medicines without producing any more than mere temporary relief; and was at this time laboring under the distressing effects of dyspepsia. On further enquiry, she informed me, that in childhood she had been very much troubled with asthma, but which pretty much subsided about the age of puberty. She did not, however, long enjoy the consolation of having gotten rid of this disease, before one of an equally distressing character made its appearance, to-wit, amenorrhœa; under which she labored until near the age of nineteen. Upon the appearance of her catamenia she began to experience symptoms of gravel; which continued to increase in violence, until she was happily relieved by an operation. On my arrival, Dr. S. represented the stone as being about three-fourths of an inch from the external orifice of the urethra. Upon making a minute examination, I discovered this to be the case, and that the stone was so large as to prevent the passing of the finger up the vagina. Deeming dilatation impracticable, we immediately determined to operate; which was performed by making an incision (with the smallest scalpel in the dissecting case,) through the vagina and urethra, immediately upon the stone. After completing the incision, the dressing forceps (in the pocket case) were introduced and the stone grasped; but discovering that it could not be extracted without considerable effort, the finger was inserted and the calculus raised from its bed, near the internal orifice of the urethra, (for it had been so long in this situation that it had become pretty firmly attached to the mucous membrane,) and then easily removed.

In a few moments after the operation, the patient was attacked with rigors, but which subsided immediately upon the administration

of a little camphor water. She soon fell into a quiet and pleasant sleep, and rested well during the after-part of the day and that night. I visited her the second day after the operation and found her doing well: pulse 85, in no pain, the incision was healing by the first intention, and the urine passing off by the natural channel.

I heard nothing more of our patient (as I lived at some distance,) until about eight days after, when I was unexpectedly summoned to see her again. When I arrived, I found Dr. Sumners already in attendance, who stated that another calculus, fully as large as the first, had come down and occupied pretty much the same position as the one already removed. I was indeed astonished; but it immediately occurred to me that, we had neglected the important and necessary precaution of sounding the bladder after the operation.

We determined to make a second effort to relieve the sufferings of our patient, whose pains had now become almost intolerable. Upon making a vaginal examination, we found the previously made incision partly re-opened; this we enlarged, then introduced the forceps, and removed the stone without difficulty. The bladder was now thoroughly explored, and no other stone being detected, she was placed quietly in bed, and the strictest orders given as to her regimen, &c.

She recovered from this second operation, without a single unfavorable symptom, except incontinence of urine, which, for some time, threatened to be very obstinate. This however was finally relieved by astringent injections, bathing, &c., and I am now happy to say, that she has since been delivered of a fine, healthy boy, and is at this time enjoying unusually good health.

The calculi are of the mulberry character; each half as large as a pullet's egg, and weighing something over an ounce. The one first removed is of an oval shape, with the upper surface smooth and polished; produced I suppose from the urine passing over it;* the other part of the stone is exceedingly rough. The second stone is round, and rough over its entire surface.

* Most probably from friction of the second calculus which latter became rough over its entire surface in the eight days after the removal of the first.—EDRRE.

ARTICLE V.

Case of Procidentia Uteri during Labor, in which artificial means were necessary to effect Delivery, with subsequent replacement of the Uterus, and complete recovery. By JOHN M. B. HARDEN, M. D., of Liberty County, Ga.

The following case, the narration of which I have received from my friend Dr. Raymond Harris, of Bryan county, is so very curious and interesting, that I have considered it worthy of permanent record and therefore send it, with the request that it be inserted in the next number of the Southern Medical and Surgical Journal. Although not occurring under my own observation, yet, from the known character of the gentleman who has furnished it to me, I have no hesitancy in vouching for the general accuracy of the details.

In April, 1829, a negro woman belonging to Capt. George Rentz, of McIntosh county, was taken in labor—She was about 40 years of age, of good constitution, mother of several children, and so far as is known, not subject to any previous prolapsus or other disease of the womb. Something unusual and anomalous having occurred during the progress of the labor, Dr. Harris was sent for. He found her, on his arrival, in the following condition:—She was lying on her back, with the whole gravid uterus between her thighs, retained only by the ligaments, which were much stretched but not ruptured, and discharging from its external surface a serous or sanious fluid. The woman had been in this condition for about 24 hours. She had had no pain since the descent of the uterus, and was complaining of none at this time. The liquor amnii had been discharged. After a careful examination, no motion or other sign of life in the fœtus could be perceived. The uterus appeared to be in a perfectly quiescent state, without any disposition to contract. The os tincæ was barely dilated sufficiently to allow the introduction of *two fingers*. Finding it absolutely necessary to relieve her as soon as possible, the Doctor proceeded to deliver her by artificial means—He opened the head of the child with a suitable instrument, and then, having an assistant to hold and support the uterus, he introduced his hand, and by careful *traction* succeeded in removing its contents. There was very little pain during his manipulations. He now returned the womb, which

had scarcely contracted at all, and advising the recumbent position, left her. She had a *very good "getting up,"* and two years ago the Doctor learned, *was in good health.*

REMARKS.—Cases of the above character must be of very rare occurrence. I have not been able to lay my hands on more than two bearing any resemblance to it—one is noticed in West's Report, published in the British and Foreign Medical Review for April, 1844,* and occurred in the practice of Dr. Perfetti. In this case, however, the procidentia was not complete, the uterus only reaching "something more than six fingers breadth beyond the external parts. The woman had been subject to prolapsus "ever since she was fifteen years old." The other had been communicated to the Dublin Medical Press, by Dr. Darbey, of Drogheda†—The woman was 42 years of age, and had had prolapsus uteri for some years. This was her seventh pregnancy. "On examination, Dr. D. found the uterus *lying between the patient's thighs*, presenting a livid appearance, and the os uteri having a dry feel and no symptoms of dilatation. The labor pains *were strong, with violent cramps in the lower extremities.*"

2. The treatment of these cases seems to have been governed by the circumstances attending them. In our first case, the os uteri was "*so hard and undilatable,*" that Dr. Perfetti deemed it necessary to *make incisions into it.* He then *introduced the forceps and extracted the child.* The mother recovered. Dr. Darbey "took thirty ounces of blood from the arm, and administered the following draught :—*R. Aq. Ment. Pip. ʒiss; Tr. Opii. Acet. gtt. 4; Syrup Cort. Aurant. ʒij. M.*—which procured rest, and checked the cramps and other bad symptoms. After a comfortable repose of two hours, *labor pains returned,* the os uteri gradually and steadily dilated, and a healthy, *but small sized child, was born.* The placenta followed after a short time, and the uterus *being replaced and suitably secured, nothing unward followed.*" In our case, the dilatation was effected by the hand after having lessened the dimensions of the head; and certainly this method should *always be preferred to incisions, unless it be found impracticable.*

3. There is an important physiological fact to be gleaned from these cases: namely, the *power of the abdominal muscles in effecting delivery;* and the case which we have now related shows plainly that

* Am. Jour. Med. Sciences, N. S. vol. 8, p. 257.

† Am. Jour. Med. Sciences, N. S. vol. 9, p. 232.

*parturition may be carried through by the action of these muscles alone, without the concurrence of uterine contraction, and naturally suggests the question, which plays the most important part in Labor? Any one who has ever had his hand in the uterus during a labor pain, must know that there is most powerful action of muscles somewhere, and he would no doubt be inclined to refer it to the uterus itself—but may not the most of this force arise from the abdominal muscles acting through the parietes of the uterus? and may not the mechanism of labor, in this regard, be similar to the mechanism of vomiting? For our part, we are very much inclined to adopt the affirmative; while at the same time we admit that the uterus has an independent action and power of its own, and that in every healthy labor, this action and contraction march *pari passu* with the expulsion of its contents.*

ARTICLE VI.

A Case of Uterine Hydatids. By GEORGE G. SMITH, M. D., of Oxford, Ga.

At the instance of some medical friends, who supposed that this case, from its novelty, might be deemed worthy of an insertion in your Journal, I place it at your disposal to publish or reject, as you may think proper.

Cases like the following, may have frequently fallen under the notice of other practitioners, but as with me it was a novel one, I noted carefully its developments and progress, and preserved my notes.

On the eleventh of November, 1843, I was consulted by the husband of Mrs. N., a lady about thirty years of age, respecting certain ascitic and anasarcaous symptoms, with which she was affected; they had made their appearance but a short time previous, and were increasing from day to day.

She was represented to be pregnant with her second child, and about four months advanced, having had the derangements of health usually attendant on gestation.

Knowing the frequency of a hydropic diathesis, in females in that

situation, I was indisposed to subject her to the operation of active remedies, until I saw her, when the alarming extent of her dropsical symptoms satisfied me that her condition would brook no delay; and that active measures must be instituted immediately for her relief.

The pulse being full and bounding, I bled her copiously, and put her on the use of active hydragogue cathartics—continuing them from day to day, and occasionally repeating the venesection, with evident benefit to her general health.

On the evening of the 22d, I was summoned in great haste to her bed side: profuse uterine hemorrhage, with occasional contraction of the womb, had occurred; and about an hour after I arrived, a discharge of hydatids took place, consisting of innumerable little encysted transparent globules of various sizes, the largest about the size of a pea; they were floating in a reddish liquid, and intermingled with coagula—the discharge continued during the night, until a quart or more were expelled, and finally an organized mass, as large as the palm of the hand, resembling the placenta, came away; the loss of blood was very great, and she was much exhausted by the excessiveness of the hemorrhage. I entertained some fears for her safety, but re-action soon occurred in her system, and on the next day, slight febrile symptoms supervened.

A course of ferruginous tonics soon dissipated the remaining dropsical symptoms, and she recovered her health, which has since continued without interruption.

PART II.—REVIEWS AND EXTRACTS.

On the Action and Uses of Aloes. By JOHN C. PETERS, M. D., of New-York.

1. It is a specific purgative, for when applied externally to a blister, it operates in the same manner as when administered internally (Gerhard); tincture of aloes applied to a carious bone, has excited purging (Monro); an aloetic pill applied to an issue has had the same effect (Pereira); also, an aloetic salve, when rubbed upon the abdomen (Dierbach).

2. The part operated upon, however, is in dispute. Wood and Bache think it has a peculiar affinity for the large intestine; and rather to its muscular coat, than the exhalent vessels, as the evacuations produced are seldom very thin, or watery. Cullen agrees with this, and asserts that it rarely, or ever, produces more than one stool, which seems to be merely an evacuation of what may be supposed to have been present in the great intestine, while hardly any dose under 20 grs. will produce a liquid stool, which effect is always attended with pain and griping. On the other hand, the ordinary bulky and rather hard evacuation may in innumerable instances be constantly obtained from 1 or 2 grs. The slowness of its operation has also been advanced by Lewis, as proof that it acts on the large, rather than on the small bowels, for it hardly ever operates under 10 or 12 hours, often not till 16 or 18, while even 24 hours may elapse; but this may be attributed to its insolubility in the stomach. Finally, to be still more minute, Newmann conjectures that it acts especially on the circular muscular fibres of the colon. Whether given in large or small doses, it hardly ever causes a copious evacuation.

3. On the other hand, aloes has been supposed to act upon the liver from times immemorial: *Aloe bilem rubeam expellit* (Rhazes); *Aloe ad inferius intestinum bilem ducit* (Aretaeus). According to Sigmond, its influence upon the liver is marked by the peculiar condition of the evacuations, the color and odor of which, and their peculiar pungent effect on the rectum, prove that an increased quantity of bile has been poured forth. Wedekind assumes that the operation of the aloes depends on an increased secretion of bile, excited by its specific action on the liver, and asserts that, as long as the stools are white or grey, in jaundice, aloes will not purge even in large doses, while the purgative effect supervenes as soon as the faecal matter contains bile;—he even carries this opinion so far as to declare that if given when the quantity of bile is normal, or increased, aloes may induce bilious dysentery and hepatitis. Vogt, too, says it is not to be doubted that it has a special action on the liver, and tends more to restoration of a checked secretion of bile than any other drastic purgative. It never causes watery stools; but the dejections are always yellowish, greenish, or blackish, and slimy, and often have a peculiarly putrid smell (Dierbach). Antyllus counts it among the remedies which evacuate yellow bile. According to Noack and Trinka, it causes aching and tension in the right hypochondrium, bilious papescient stools, with heat of the whole body, and uneasiness in the region of the liver, while the evacuations produced are faecal, bilious, not watery or copious, and emit a peculiar putrid smell. Its effects are so distinct and characteristic, that, when added to other purgatives, they do not take place until some hours after the evacuations caused by the other purgatives, and its stools differ both in color and smell.

4. A third set of physicians believe that it acts primarily and specifically upon the vena porta system, and assume that its influence

upon the liver and bowels is secondary to this. Thus, Braithwaite says: "That it acts upon the vena portarum, is fairly to be deduced from the very peculiar state into which the hæmorrhoidal vessels are thrown by the congestions which so rapidly occur after a dose of this drug has been taken, and also by the condition of the uterine vessels, which has led to its employment as an emmenagogue." When frequently repeated, it is apt to irritate the rectum, giving rise in some instances to hæmorrhoids, and aggravating them when already existing; it also has a decided tendency to the uterus, for its influence in promoting menstruation is by no means confined to cases in which its action on the neighboring rectum is most conspicuous (Wood and Bache). Cullen has seen hæmorrhoids produced from large and frequent doses; it acts specifically upon the rectum, and, in a full dose, is in some persons apt to excite heat and irritation about the rectum and tenesmus, while, in those troubled with piles, it is said not unfrequently to increase, but even to bring on the sanguineous discharge (Pereira). Fallopius says, that of 100 persons who had used aloes freely as a purgative, 90 became affected with a hæmorrhoidal flux which ceased when its use was omitted; it causes a determination of blood to the uterus, and fulness of the bloodvessels, especially its veins, and thus uterine irritation and menorrhagia are apt to be induced or increased by it (Pereira). Wedekind says it exerts a specific stimulant action on the venous system of the abdomen and pelvis, and hence causes increased secretion of bile, irritation about the rectum, and vascular excitement of the sexual organs; piles, strangury, immoderate flow of menses, and racking pains in the loins, like labor pains, are frequently induced by it (Fothergill). The congestive power of aloes may go so far as to cause a flow of blood from the kidneys, uterus and rectum (Soternheim). It readily causes stagnation and accumulation of blood in the abdominal vessels, and various affections and consequences of Plethora Abdominalis; sometimes, even when given in small doses, it may cause congestions, anxiety, burning when urinating, urging to stool, increased pain in the loins (Vogt). It is a heating remedy, and in young persons readily excites febrile symptoms, quick pulse, troublesome sensation of warmth in the abdomen, &c. (Dierbach). Finally the excited condition of the vena porta system may extend to the whole of the venous side of the circulation, and congestion, to the head and chest, but especially to the abdomen, may arise, attended with an unpleasant heat, anxious feelings and throbbing, with increased sensibility and distension of the abdomen, frequent watery stools, mixed with blood, or bloody stools with violent and cutting abdominal pains, piles, violent pains in the kidneys, scanty hot urine, burning when urinating, discharge of blood from urethra, drawing and burning in the sacral region, &c. (Noack and Trinks). Harnisch says, after the use of aloes in very sensitive or plethoric persons, we notice burning when urinating, tenesmus, aching and heaviness in the pelvis, erections and pollutions, an excitement of the hæmorrhoidal and uterine vessels.

and even a similar action of the whole vascular system, so that the pulse becomes fuller and harder, the mouth dry with thirst, scanty discharge of red urine, increased sensation of warmth in the abdomen, throbbing and aching in the right hypochondrium (liver), congestion of blood to the head and chest, with anxiety, bleeding from the lungs, and even apoplexy.

To conclude the enumeration of the peculiarities of the action of aloes, we would state that, an increased quantity does not produce a corresponding cathartic effect; it is alleged by Lewis that its effects are more permanent than any other purgative, although Cullen contradicts this, and states that notwithstanding the use of aloes, costiveness will return at its usual period. Small doses often occasion erections, and increase of sexual appetite (Wedekind). Greenhow ascribes a diuretic effect to aloes, and Moirond injected 4 drachms into a vein of a horse, with no other effect than producing the evacuation of a large quantity of urine. It may cause emaciation, stricture of rectum and enteritis; and if given during pregnancy, in large doses, it may produce abortion (Vogt). If its use be long continued, it causes dryness of the intestines, paralytic-like rigidity of the muscular coat, especially of the colon and rectum, in consequence of which obstinate constipation may result; in too large doses it causes violent cutting abdominal pains, watery and long-continued diarrhoea, tenesmus and inflammation of the lower portion of alimentary canal (Vogt). In Moirond's experiment of injecting 4 drachms into a vein of a horse, the fæces were passed enveloped in a thin pellicle of altered intestinal mucus. It causes discharges of membranous-like pieces of mucus from the rectum, and very large rolled-up pieces of intestinal mucus (Noack and Trinks). It has caused vomiting of blood. From very large doses, we at times get a watery diarrhoea, with violent cutting pains, or a long-continued sanguineous diarrhoea, with tenesmus and even inflammation of the bowels. Cullen says it was once a common opinion that aloes dissolved the blood, or increased its fluidity, and Lewis alleges that this is the condition of the blood drawn from persons who are in the habit of using aloetics, although, according to Schwenke, it seems rather to coagulate than dissolve the blood when added to some which has been drawn from a vein. It was an old opinion that it proved emmenagogue from its power of dissolving the blood, and hence was hurtful in scurvy, and all hæmorrhages proceeding from a lax state of the blood and system. It acts as readily in substance as in solution (Cullen).

Therapeutical uses and effects.—1. In disturbances of digestion dependent upon weakness of the muscular fibres of the stomach and bowels; in abnormal secretion of mucus, acid, gas, &c.; in anorexia, dyspepsia, flatulent distension, and painful aching in the region of the stomach, with acid, rancid eructations, sluggish digestion, and constipation, especially of hypochondriacal persons—(Sobernheim). It generally sits well upon the stomach, for its bitterness renders it an

admirable stomachic, which promotes both appetite and digestion ; some think that it regulates the due secretion of the gastric juice, while the ancients termed it *anima ventriculi*.

2. But its principal use is in habitual costiveness and obstinate constipation from a long dilatation of the muscular fibres of the intestine, with dryness of the mucous membrane, diminished and abnormal secretion of bile ; under such circumstances it is often the only remedy which may be used for years without injury. (Doses, 1 or 2 grs.)

3. In diseases of the liver, we have already alluded to Wedekind's experience with it in jaundice ; as long as the stools remain light colored, he pushed it in large doses, viz. half a scruple twice a day ; as soon as bile began to appear in the fæces, he immediately reduces the quantity to one or two grains, and even omits its use for one or several days.

4. In affections of the menstrual hæmorrhoidal secretions. The experience here is very curious ; in former times it was regarded as the *sacra anchora* in the cure of hæmorrhoids of an asthenic character, although aloes produces active congestive piles. It was also used to restore the hæmorrhoidal flux, when troublesome nervous affections, such as hypochondria, melancholy, mania, cramp of the stomach, &c., were induced by their suppression. Five grains, several times a day, was then the usual dose. By restoring the hæmorrhoidal secretion, it has also relieved the sensations of aching and weight in the pelvis, the eruptions, pollutions, urging to stool, &c., which are often felt as premonitory phenomena of the occurrence of piles. At times these moliminal hæmorrhoidals pass over into flowing piles, under the use of aloes, while at others they cease without any discharge having been produced. Under the latter circumstances, Harnisch conjectures that the tonic and stimulating effects of aloes removes the weakness of the vessels upon which the premonition of piles has depended, i. e., the active congestion produced by the aloes overcomes the passive one, which previously existed in his opinion. Locseke also asserts, that if aloes be given before the accustomed flow of piles comes on, the flux will ensue ; but, on the other hand, if given while they are flowing, a stoppage will be effected. Irregular hæmorrhoidal congestion to the head, chest, stomach, bowels, liver, spleen, kidneys, uterus, bladder, &c., with their attendant redness and heat of the face, illusions of vision, threatened apoplexy, a constriction and anxiety about the chest, and even hæmoptysis, or throbbing, aching, &c., about the stomach, with hæmatemesis, or aching in the liver or spleen, with threatened dropsy, or hæmorrhage from the stomach or bowels, or aching in the region of the kidneys with scanty discharge of hot urine, or tenesmus of the bladder from venous congestion of it, and hæmaturia, or congestion to the uterus with menorrhagia, &c., have all given way before the use of aloes (Harnisch). Eberle corroborates the above in one particular (see Practice, vol. i., p. 572). He writes : " Would not Dr. Dewey consider aloes a very improper rem-

edy in the menorrhagias of young, sanguineous and robust females? He no doubt would; and why? because experience has shown that this article is among our most efficient means for exciting the uterine vessels and directing the afflux of blood to them. Yet this article, given in small doses, but frequent ones deserves to be accounted the best remedy we possess for those protracted, exhausting, and obstinate hæmorrhages from the uterus which occur in those of relaxed, nervous, and phlegmatic habits, about the critical period of life. When, therefore, we see a particular modification of this discharge arrested by a remedy which we are accustomed to regard as decidedly calculated to stimulate the vessels from whence the bleeding occurs: in other words, when we cure hæmorrhage by stimulating applications, the conclusion is irresistible that it depended upon debility."

The above is a good example of the very numerous instances in which a very close symptomatic similarity masks a very wide pathological difference. According to Andral, it is a law in pathology that very similar symptoms may arise from very different affections. It is notorious that anæmia is often attended by symptoms which render it liable to be mistaken for hyperæmia; thus the pulse may be frequent, vibrate violently, be deceptively hard and tense, while the heart palpitates and beats forcibly as in active congestion or inflammation; anæmia of the brain and spine is often attended with pain and throbbing in the head, delirium, ringing in the ears, sparks before the eyes, and general convulsions; the *apoplexia ex inanitione* may be attended with the vertigo, stupefaction, entire loss of consciousness, stertorous respiration, &c., which attend true apoplexy with effusion; bloodless lungs are dyspnoic; the bloodless heart palpitates violently; the bloodless stomach is dyspeptic, tender to touch, nauseated, &c. Bark and iron cure the above anæmic affections, antipathically, although they produce very similar symptoms, depending, however, upon the very opposite, i. e., a plethoric state of the system.

According to Symonds, the evacuations produced by the purgative which cures a diarrhœa, are very *different* from those that constituted the latter, and argue a dissimilarity in the state of the membranes that furnished them. The inflammation produced in the eye by the nitrate of silver is *different* in character from the inflammation which it is so useful in removing, &c. In Fletcher's "Elements of Pathology," p. 486, we learn that "In the first stage of inflammation there is constriction of the capillaries; in the second, there are relaxation and enlargement of these, allowing an increased quantity of blood in them, causing redness, swelling, heat and pain in the part. Now, if in the latter state of the vessels, a stimulus be applied, it must produce constriction or contraction of the enlarged vessels, and hence remove one cause of the disease, viz., the enlargement and relaxation of the vessels. Examples of the utility of stimulants in this second stage of inflammation are familiar in the treatment of ophthalmia and gonorrhœa."

Constipation may be cured antipathically by drugs, the marked

action of which is to induce constipation. Thus, one of the most common causes of this state of the bowels, is a torpid, relaxed, dilated and enfeebled condition of the colon; now iron, lime, lead, alum, all which cause a constipation depending on a dry and contracted state of the colon, may cure the first-described condition. *Nux vomica* causes constipation, depending on a spasmodic state of the bowels, and may cure antipathically a constipation arising from a sub-paralytic state. Opium induces constipation by benumbing and stupifying the muscular fibres of the colon, and will cure constipation depending upon spasm, &c.

Again, admitting that Peruvian bark causes chills, fever, and sweat, this by no means proves that this remedy cures fever and ague homœopathically. For, in the first place, we have perused Hahnemann's description of the effects of bark on the healthy, repeatedly and carefully, and never have succeeded in finding any proof that it induces intermittent affections of any kind; much less a fever characterized by regularly periodical exacerbations and intermissions. In the second place, the bark-fever is an arterial congestive fever, while the intermittent is a venous congestive one. Professor Mitscherlich, of Berlin (see *Mat. Med.*, 224), says, "From the long continued use of bark, we notice an increase in the quantity of the blood, which also becomes more arterial in quality, hence the pulse becomes fuller and stronger, the skin, especially of the face, becomes redder, congestions ensue, and a *continued* fever may arise." Dr. James Johnson (see *Med. Chir. Rev.*, Jan., 1837, p. 193), says: "If we watch the operation of Peruvian bark, we find that it excites the action of the heart and capillaries, increases the strength and invigorates the system. If pushed beyond a certain point, the bad effects that follow are just what might be supposed to result from an excess of the same sort of action; too much blood is made, and it is circulated with too much force. Sanguineous congestions or local inflammations ensue, and the whole system becomes overloaded and oppressed with blood." How different, nay, how exactly opposite, are the ultimate effects of fever and ague, viz., a cachectic, almost chlorotic, or leucophlegmatic state, marked by paleness and sallowness of the surface, a deficiency of fibrin in the blood, which becomes more venous and watery, and hence predisposes to dropsical affections, stagnations, and infarctions of the blood in the liver, spleen, &c.

Mercury produces ulcers and eruptions, but they differ widely from the syphilitic. The true Hunterian chancre, or indurated ulcer, against which mercury is most serviceable, is rather small, nearly circular, deep, and excavated, the base and edges as hard as cartilages, and is attended with little pain or inflammation, &c.; on the other hand, the mercurial ulcer is superficial, has a broad base, bleeds easily, is painful, and most nearly resembles a phagedenic ulcer, while, according to Pereira, it is well known that venereal sores at times assume a sloughing disposition from the improper use of mercury. Hence it is evident that mercury is most homœopathic to the phaga-

denic variety of venereal ulcer." But in deciding on the use of mercury in syphilis, another point deserving attention is the condition of the primary sore; if it be of the kind called phagedenic, or at all disposed to slough, mercury must be most carefully avoided, as it increases the disposition to sloughing." (Pereira, Mat. Med., vol. i. p. 597.)

Mercurial eruptions are as rare as the syphilitic are frequent: of these, a vesicular eruption, the *eczema mercuriale*, is the most frequent and best known. On the other hand it is well known that "an eruption, having the vesicular form, and developed under the influence of a syphilitic cause, is unquestionably not a common occurrence." (Willis.) Rayer, too, speaks of syphilitic eczema as extremely rare, for in all his vast intercourse with skin-diseases, he met with two examples only. An acrous, or indurated tuberculous, is the most common syphilitic eruption. We can readily conceive how a drug which tends to produce broad, superficial, spongy, and relaxed ulcers, may change the action of a narrow, deep, firm and hard ulcer; a drug which tends to cause vesicular, i. e., scrofulous eruptions, may change the action of a tubercular one, which depends upon the pouring out of plastic and firm lymph from the blood-vessels, &c.

It is needless to multiply examples, for it is evident from those already given, that remedies which act very similar to the action of a given disease, in reality exert an *alterative* action upon that disease. In the earlier stages of his discoveries, Hahnemann recognized the truth of this position, for he states in the 45th paragraph of his "Organon," that "two diseases which *differ greatly* in their species, but which bear a strong resemblance in their symptoms, always mutually destroy each other;" and volunteers the admission in his "Spirit of the Homœopathic Doctrine," that "without this *natural difference* between the affection arising from the disease, and that arising from the drug, no cure could possibly take place, but only an exasperation of the evil." At a later period, he became so blinded and infatuated as to overlook the above irresistible conclusion, and in his precepts and practice even virtually to deny it, and set up the law, "*similia similibus curantur*," as the only true law in therapeutics; but, struggle as he would, all his attempts at explanation resolved themselves into old school theories, as is again evident in his assumption, that every remedy has two sets of actions, viz., primary and secondary, the latter of which is exactly opposite to the former; whence he again assumes that, although the primary action of homœopathic remedies is similar to that of the disease, yet their secondary one is exactly opposite, and is willing to admit that this secondary opposite action effects the cure.

"We have names, diseases, remedies, notions, theories and explanations different from those of olden times; but the art of healing is still the same, nature is the same, and the same capacities are required for becoming an adept in medicine, as at the time of Hippocrates."—(Hufeland.*)

* See "Enchiridion Medicum."

The preceding excellent article, we have taken entire from the original department of the March No. of the New York Journal of Medicine. The only omission we notice by its author of the action and uses of aloes, is that recommended a few years ago by Professor Trousseau, of Paris, viz., as revulsive to the rectum in cases of apoplexy, &c. A suppository or injection of aloes bringing on in a short period, an attack of piles, or an effort that way.

Essay on Inverted Toe Nail. By Dr. E. ZEIS.

The affection usually known as the "inverted Toe Nail," or, to translate the denomination employed by our author, "the growing of the nail into the flesh," is one, when we consider the frequency of its occurrence, and the severe suffering by which it is attended, and the impediment to the use of the foot in walking which it presents, is one of no trifling importance. Every thing, therefore, that is calculated to throw light upon its true nature and causes, and the means by which it may be most certainly and effectually remedied, becomes of interest.

By almost every writer the entire affection, the inflammation of the soft parts, their suppuration, the intensely sensible fungous granulations which shoot up from the lateral edge of the nail, and cover the greater part of the latter—together with all the attendant suffering and lameness—and which, in many cases, continue for months and years—have been ascribed to the edge of the nail pressing upon or penetrating abnormally the soft parts—either in consequence of the too great breadth of the nail, its too arched form, or the unnatural downward direction of its edge; and hence the remedy that is proposed by different surgeons is either the destruction of more or less of the nail, the changing of its form, or the drawing out of its edge from the flesh, and the preventing its again embedding itself into it. They all consider that it is the nail which is in fault, and the whole of their attention is directed to correct its abnormal action upon the soft parts.

Many of the operations proposed even by surgeons of a very late date, are painful and cruel in the extreme, and few of them afford any other than a temporary relief, while some are calculated ultimately to increase the very evil they are intended to remove.

"If," remarks Dr. Zeis, "the cure of the affection, supposed to result from the growing of the nail into the flesh, was formerly too often attempted by the destruction of the nail, it is only since Dupuytren has counselled its entire outrooting, that the operation has

been generally sanctioned and adopted. Me it has, in every instance, filled with horror, and I am happy to say that I could never be induced to perform it. I have had repeated opportunities of observing those patients who had been operated on, according to Dupuytren's method, by other physicians; and found them far being relieved from their sufferings. Notwithstanding the offending portion of the nail had, in each case, together with its root, most certainly been torn out, as was evident from the separated portion, which they showed me, yet, they had again been supplied by the lateral growth of the remaining part of the nail, but without any connection being formed between the new growth and the matrix, so that a probe could be passed freely from its upper edge to its root. The free lateral edge of this new unattached portion kept up a constant irritation in the soft parts, and re-excited an inflammation in them, unless it was kept constantly cut short, and in such a manner as to prevent the occurrence of a thin sharp edge—by which the original affection would be liable to be reproduced. Now this repeated trimming of the nail the patient was unable properly to perform himself, but it required that he should call in, from time to time, the aid of the surgeon, if he would avoid the very suffering, for the removal of which he had already undergone a most painful operation."

In the 14th volume of Graefe and Walther's Journal, (page 234,) the reader will find an excellent essay on the inversion of the nail, by H. S. Michaelis, in which is contained a very complete notice of the several operations proposed for its cure—and, in the same journal, (vol. xxii. p. 108,) there is a paper, by A. Sachs, on the same subject, in which the different plans of treatment that have been recommended are examined systematically.

In the medical journals, particularly those of France and England, we meet almost constantly with the recommendation of novel modes of treatment, which, however, are, in most cases, merely modifications of those that had already been proposed.

The most cruel of these operations is that described by Neret, (*Archives Générales de Méd.*, June, 1838,) who directs a spatula to be forced down beneath the nail to its root, and then carried towards the offending edge, so as to separate it fully from all its adhesions; the nail being now turned towards the opposite side of the toe, is to be torn out. Dr. Zeis very properly remarks, that the amputation of the toe would be a more gentle and preferable operation to that of Neret.

Larrey (*Clinique Chirurgicale*, 1836) recommends the nail to be divided, a short distance from the diseased edge, (one-third the breadth of the nail,) by means of a sharp-pointed scissors; the divided portion is then to be separated at its root from the skin by which it is there covered, turned back and torn out. As soon as the hemorrhage ceases, the part from which the nail is removed is to be cauterized by a hot iron; the dressings are then to be applied and kept on fourteen days, when the lunar caustic is to be freely applied.—

This differs from Dupuytren's operation only in the smaller portion of the nail that is removed.

Baudens directs the knife, which is to be held in the same manner as in cutting a pen, to be applied a few lines above the root of the nail, on its diseased side, and then carried down to the bone, when, with one sweep forwards, the whole of the inverted edge, together with the spongy flesh in which it is imbedded, is to be removed.

Others advise the destruction of the whole nail, or a portion of it, by the application of caustics. Thus Payan, (*Revue Méd.*, July, 1840,) after covering so much of the nail as is not to be destroyed with adhesive plaster, applies to the uncovered portion a caustic composed of equal parts of caustic potass and lime. The same procedure is recommended by Barbette and Bordes, (*Journ. des Connaissances Med. Chirurg.*, Nov., 1839—June, 1840,) by Albers, (*Correspondenz blatt Rhein. u. Westphäl. Aerzte*, B. 1. N. 5,) and by Moreau, (*Gaz. Méd. de Paris*, 1836, No. 52;) the latter, however, employed the caustic burnt alum, which required eighteen to twenty months to effect a cure. Labat, (*Broussais' Annales*, 1834, No. 9,) in order more rapidly to relieve the patient of his suffering, destroyed at once the root of the nail by the actual cautery, which is the treatment recommended, also, by the reviewers of Schreger's "Grundriss der Chir. Operationen," in the *Salzb. Med. Chir. Zeitung*, 1827, No. 55.

Donzel (*Essai sur l'ongle incarné, etc.*, Strasbourg, 1836) directs the skin to be dissected back from the root of the nail, and the wound to be filled with charpie; on the following day it is to be filled with *pâte caustique*—the joint of the finger being first well dried and covered with adhesive plaster. After the separation of the slough, the edge of the nail, which has been laid bare, is to be removed by the scissors.

Others object to the destruction of any portion of the nail, either entirely or temporarily, and propose various procedures by which the nail may be kept from contact with the inflamed portion of the soft parts, until these have been completely healed. Sachs (*Graefe and Walther's Journ.*, vol. xxii. p. 108) directs the general health of the patient to be restored by appropriate remedies, in conjunction with a proper diet and regimen; the inflammation of the foot to be reduced by the usual antiphlogistic means; and the pus which is formed to be discharged, and at the same time the loosened edge of the nail to be removed by means of a forceps and scissors, either by a simple or V formed incision. If the swelling of the soft parts prevents this from being readily effected, a portion of compressed sponge should be introduced beneath the edge of the nail and kept there until this has been sufficiently freed from the spongy granulations by which it has become imbedded, taking care, however, at the same time, not to employ too great a degree of pressure, as this may increase the suffering of the patient. The healing of the ulceration may be promoted, after the excision of the nail, by the use of tonics.

Martin (*Recueil de Mémoires de Méd. de Chir. et de Pharm. Militaires*, vol. 39, 1836) recommends a triangular portion to be cut out of the middle of the nail, the base being at the free edge; and then the cut edges of the nail to be drawn together by means of a suture of brass wire, with the view of removing the lateral edges of the nail from contact with the inflamed portion of the toe. This operation, independently of being very painful, can afford only temporary relief, inasmuch as the constant growth of the nail will quickly counteract whatever advantage may result from the artificial reduction of its breadth.

Cooper and Burnett (*Lond. Med. and Phys. Journ.*, Ap. 1827, and Feb., 1829) simply recommend the inverted edge of the nail to be removed from the point to the root.

Other surgeons have proposed to give to the nail a less arched or flatter form, so as to prevent, in this manner, its edges from pressing inward upon the soft parts. Houlton (*Lond. Med. Repos.*, Sept., 1824) directs the nail to be shaved as thin as possible at its centre; a triangular piece of cork is then to be inserted, on each side, between the nail and the toe—whether under or above the nail is not said—and a third piece, about one-third the breadth and of the same length as the nail, upon the thinned portion of the latter, and over these a piece of adhesive plaster and a bandage, which is to be changed every three days. Biessy (*Revue Méd.*, 1830, t. ii. p. 54) shaves the whole of the nail as thin as possible, and then touches it six or eight times with lunar caustic, until it shrivels up, and its edges are, in consequence, drawn out of the soft parts. This procedure cannot fail to produce the entire destruction of the nail. Rothamel (*Zeitschrift für die Ges. Heilk.*, etc., B. 1, Hft. 1) directs the nail, for the breadth of two lines, extending from the point to the root, to be scraped as thin as possible, by means of a piece of glass. Pressure being now made upon the central portion of the nail, the edges are so far drawn up as no longer to bear upon and irritate the inflamed soft parts. The scraping of the nail is to be repeated every other day.

Pétréquin (*Archiv. de Méd. Belge.*, March, 1841) thins the nail by means of a file, and applies pressure upon it by means of sponge and adhesive plaster; others, as Bonnet (*Bulletin de Thérap.*, Aug., 1834,) propose to flatten the nail, and thus relieve its edges, by bandages and graduated compresses alone. Labarraque (*Gazette des Hôp.*, April, 1837) employs a thin plate of lead, bent in a particular manner, one edge of which is inserted beneath the edge of the nail. A somewhat similar plan is pursued by Lechler (*Würtemb. Med. Correspondenz blatt*, B. 8, N. 47). According to Vésignié, (*Journ. Hebdom.*, N. 34—36, 1836,) the plan of Brachet consists in cutting away the soft parts; and when the nail requires to be entirely destroyed, he prefers Dupuytren's operation, in conjunction with the cautery. In the generality of cases, he merely removes the superfluous portions of the nail, and then puts on a clasp composed of a number of silver plates, which is elevated by means of a screw, and raises up with it the edges of the nail, by which means all pain is removed.

"It is not," remarks Dr. Zeis, "merely the painful and cruel character of the principal operations that have been proposed for the cure of the inverted toe nail, that renders them so disgusting to me—other operations are attended with much pain and suffering, which excite in me no such feeling. But my opposition to them is derived from the circumstance, of the whole of them being based upon erroneous principles, and their being all unadapted to afford any radical and permanent relief."

In many, though by no means in the majority of cases, the cutting the nail too short is the primary cause of the affection. The soft parts, being no longer kept down by the projecting free edge of the nail, are forced, by the pressure of the shoe or boot in walking, against and even over the truncated end of the nail, and, as this again increases in length, it may be made to even penetrate into them—giving rise thus to inflammation, swelling, ulceration and fungous granulations, with a degree of suffering, which often renders the slightest motion of the foot unbearable. The disease is most liable to occur in the great toe, in consequence of the greater amount of motion and pressure to which it is subjected in walking. The patient seeks to relieve his sufferings by constantly cutting away portions of the nail, but in so irregular and unskilful a manner as rather to increase than diminish the evil.

The disease most commonly occurs at one or other of the lateral edges of the nail of the great toe—and in this case without the nail having been cut at all. No doubt, in numerous instances, it results entirely from the soft parts being pressed by too narrow or misshapen boots or shoes against and over the sharp edge of the nail. But cases frequently occur where it cannot, with propriety, be referred to this cause. Dr. Zeis believes, that under such circumstances, its production is to be attributed to that particular constitution of the blood, which, in certain persons, predisposes to furunculi and other spontaneous local inflammations.

The inflammation once established, it is evident that the hard and sharp edge of the nail must act as a foreign body, and, by its constant irritation, keep up and aggravate the disease—giving rise to suppuration, ulceration and the production of luxuriant fungous granulations, of an intensely painful character, which rise up over the edge of the nail, and often cover it to so great an extent, that we are unable to obtain a sight of it, even by drawing them on one side. It is this that has favored the belief, that the whole of the evil has resulted from the too great breadth of the nail causing its edges to grow into the flesh; but there occur a greater number of broad nails unconnected with the affection under consideration, than there do in connection with it.

Michaelis describes a condition of the nail, which he supposes to particularly favour its growth into the flesh. This is a very rounded form of the nail, so much so, that it resembles the half of a perfect cylinder. This condition of the nail Dr. Zeis has repeatedly observed, but not always in cases of its so called growth into the flesh; on

he contrary, he has, in numerous instances, met with it in individuals who had never suffered from this affection. Even when the disease has been connected with an arched condition of the nail, it has been entirely healed without the destruction or flattening of the latter.

Dr. Zeis considers that it is all-important, in every case, to attend to the condition of the patient's general health, which, in a large number, will be found to be more or less deranged. As the patient's health improves, under an appropriate therapeutic and hygienic treatment, the affected foot being kept at rest, and the toe guarded from all pressure, either in walking or from a too narrow boot or shoe, the local disease will be found, very generally, to diminish, and, in a short time, to disappear entirely.

If, however, the disease has resulted from keeping the nail too short, the doctor considers it indispensable that it should be allowed to attain its proper length, which, with the simplest dressings, and the avoidance of motion and pressure, is sufficient to effect a perfect cure. So soon as the nail acquires the slightest projection, he is in the habit of introducing beneath it, by means of a fine probe, a small portion of charpie, and to prevent the falling out of this, he covers the end of the toe with adhesive plaster, spread upon gold-beater's skin, which adapts itself better to the parts, and produces a less amount of pressure than when it is spread on silk or linen. The toe is then to be bathed frequently, during the day, in warm water.

If the soft parts, at the point of the toe, are in so swollen a condition as to interfere with the dressing just directed, or completely to cover and conceal the edge of the nail, Dr. Zeis is in the habit of removing them by the knife.

"Even in those cases," he remarks, "in which the nail has been cut so close as to be reduced to one half its length, under the above treatment, it will require but two, or, at the furthest, three months to effect a permanent cure, and to restore to the nail its proper length and natural shape.

"Much more obstinate, however, are those cases in which the disease affects, at the same time or is entirely confined to, the side of the nail. These are, especially, the cases in which the destruction of the whole or a part of the nail has been considered indispensable to the cure. I have, however, in such, seldom failed to secure the entire and permanent relief of the patient by rest, the frequent use of the foot bath, and the removal, by the knife, of the fungous granulations or spongy and morbidly sensible flesh, by which the edge of the nail becomes covered. I will not, however, pretend to deny," he adds, "that cases of a very aggravated character may occur, in which the unhealthy condition of the ulceration, seated beneath the nail, will require the loosened edge of the nail to be cut away, that our applications may be applied directly to the ulcerated surface, and also to prevent the constant irritation which is kept up in it by the detached portion of the nail. It is never necessary to destroy the whole or any part of the nail, even under such circumstances."

The leading propositions which Dr. Zeis has attempted to establish in the essay before us, are thus summed up in the author's own words.

"1. The so called growing of the nail into the flesh, is not, excepting, perhaps, in a very few cases, the result of a too great breadth of the nail; but is caused entirely by the inflammation and intumescence of the soft parts.

"2. The arched condition of the nail, which is of frequent occurrence, is perfectly natural, and neither can nor requires to be changed by shaving away the nail and the application of pressure.

"3. It is not, therefore, to the removal of any morbid condition of the nail that the attention of the surgeon must be directed, but to the removal of the inflammation of the soft parts, the healing of an ulceration that may exist, and the destruction of the intumescence caused by the fungous flesh about the edge of the nail, which latter is best effected by cutting it away with the knife.

"4. In the treatment of the local inflammation, in the affection under consideration, the frequent use of warm pediluvia is preferable to, and more effective than most other means.

"5. In a few cases, of infrequent occurrence, the temporary removal of the loosened edge of the nail will be required: in the majority of cases, however, even this will not be necessary.

"6. The removal or destruction of the whole or any part of the nail, is in no case required; and from its severity, and the mutilated state in which it ever after leaves the foot, should be considered as an unwarrantable practice, and one to be entirely banished from among the operations of surgery."

We have given to the essay before us an extended notice, because the frequent occurrence of the affection of which it treats, the intense suffering with which it is invariably attended, as well as the evident ignorance that exists in relation to its true character, as is evidenced by the severe and uncalled for operations which have been proposed for its removal, induce us to believe that a very full exposition should be given of the views of an author who has thrown much light upon its pathology, and presented a plan of cure as simple as it is effectual.

The views advocated by Dr. Zeis in relation to the causes of the inverted toe-nail, we have entertained for many years; and have pursued a plan of treatment very similar to that which he recommends. In no instance have we had occasion to remove any portion of the nail, though we can conceive of cases in which the cutting away of the loosened edge of the nail may be necessary, as Astley Cooper remarks, to allow of the healing of the ulceration of the soft parts, by removing the irritation which the nail constantly keeps up. The success with which this plan of treatment has been attended, in the cases that have fallen under our care, emboldens us to recommend it strongly to the notice of the profession.—*The American Journal of the Medical Sciences.*

Comparative value of the different Preparations of Mercury and Iodine, and the best modes of administering them. By EDWARD OCTAVIUS HOCKEN, M. D., &c., Physician to the Blenheim-street Infirmary.

Mercury is employed locally and generally, either to produce a local effect simply, or, by its admission into the system, to bring the whole constitution under its influence. The mercurial influence is induced in the system by the introduction of mercurial preparations into the stomach, or by fumigation, or by inunction. In the first method we employ the chloride, bichloride, iodide, *pil. hydrarg.*, &c., &c.

Chloride.—Calomel is chiefly useful when we wish to produce a speedy and powerful action on the constitution, as in venereal iritis or orchitis, but is less adapted to the ordinary symptoms. On the Continent it is extensively employed in tubercles of the labia, with or without ulceration, in various forms of creeping ulcers, and also in ulcerations of the throat and nasal fossæ. Desruelles says, that he cannot too much recommend this preparation, which, united to opium, and an anti-phlogistic regimen, may produce the most beneficial results. Ricord employs the following pills in the treatment of enlarged testicle, which remains after inflammation of that organ :—

Hvd. Chlor. ʒi. Pulv. Conii, Sapon. Hosp. aa ʒij. M. ft. pil. xxiv.

Bichloride.—M. Dupuytren ordered this remedy in small doses, one-sixth of a grain three times a day, in constitutional syphilis, and on the Continent it still continues to be extensively used for this purpose. In some chronic cases of syphilitic skin disease, I have seen it used with advantage; but as a general remedy in secondary syphilis it requires more care, is more dangerous, and altogether is a less eligible medicine than blue pill.

Pilula Hydrargyri.—This medicine is the form most used and relied on in England, and as it is one of the mildest, safest, most certain, and most manageable preparations of mercury, it justly deserves the preference given to it. In doses of five grains two or three times a day, it is applicable to nearly all those conditions which we have shown to be benefitted by mercury.

Proto-ioduret.—MM Cullerier, Bielt, Ricord and others employ this remedy in many forms of constitutional syphilis, especially where secondary and tertiary symptoms are combined, and in primary sores in strumous habits. Cullerier says, that it is chiefly in constitutional syphilis that the proto-ioduret of mercury is administered with success. Its effects are principally evident in secondary ulcerations of the mucous membrane, cutaneous tubercles, exostoses, and chronic affections of the joints, where the other preparations of mercury have had little effect. It should always be guarded by opium, and given in half grain doses twice or thrice a day. The deuto-ioduret is more

stimulating, and consequently its dose is smaller. Either of these may be employed in friction upon tumours and indolent buboes, after the removal of all acute inflammatory symptoms.

The cyanuret and deuto-phosphate of mercury are occasionally employed. The former is said to be preferable to the bichloride, being less apt to disagree, and less readily decomposed. It is an useful external application in some skin affections, allaying the violent itching and irritation of what M. Alibert terms *herpes squamosus*.

Inunction.—Inunction by the mercurial ointment was formerly employed to mercurialize the system more frequently than at the present day. In this way the mineral is less apt to disagree with the system, especially the alimentary canal, although, when used alone, it is less speedy in its effects. In buboes, I imagine that Hunter was correct in his opinion concerning the advantages of making mercury pass through the affected absorbents. The *Ung. Hydrarg.* is used in the quantity of half a drachm to a drachm night and morning, to be well rubbed in, before a fire, on the more delicate portions of the skin. Cullerier prefers using mercury by friction in primary sores; he orders from a quarter of a drachm to a drachm and a half of mercurial ointment at each friction, leaving an interval between them of one, two, or three days, with the view of not irritating either the sore or the constitution, by bringing the latter suddenly under the influence of the remedy. Ricord frequently orders the frictions to the axillæ, and they are employed in this manner by Cullerier, in certain forms of ulcerations of the mouth and fauces. He narrates two cases cured by mercurial frictions in this situation, which had resisted its employment on other parts.

Fumigation.—Fumigation of the whole surface of the body is, at present, rarely used as a method of affecting the system, but the apparatus formerly employed is still to be found in some of our hospitals. It is very speedy in its action. The remedy is, however, employed locally, and with great advantage, in some affections of the throat and nasal fossæ, directed to the part by a suitable apparatus, and more generally in some obstinate diseases of the skin. For patients who have not strength to rub in mercury, and whose bowels will not bear the use of internal remedies, it has been esteemed highly advantageous.

Topical Applications.—As mere local applications, calomel, black wash (*Hydrarg. Chlorid.* x vel xv. grs., *Aquæ Calcis* ʒi.), yellow wash (*Hyd. Bichlorid.* i. vel ij. grs., *Aq. Cal.* ʒi.), solutions of the bichloride in distilled water, the nitric oxide ointment, the nitrate ointment, the simple blue ointment, and the *Ung. Hyd. c. Ammoniac*, are all of them occasionally applied. We select from these in proportion to their stimulating properties, adapting to the condition of the symptoms we treat. Whatever preparation of mercury be selected for internal employment, it should always be combined with opium or conium, as a certain degree of constitutional irritability almost always accompanies syphilis, which is most favorably influenced by

such medicines, and, in some cases where there is sthenic inflammation or fever, antimony. M. Bielt's practice has constantly furnished numerous instances where these affections have disappeared under the influence of opium alone without mercury, and MM Ricord and Cullerier support similar views. Dr. Wallace says, that it will be always most prudent to combine the mercury with opium and antimony. No harm can result from this practice; and by it much inconvenience may perhaps be avoided. The combination of antimony and mercury has always appeared to him to render the influence of the latter more manageable, as well as more certain, while the addition of opium diminishes the irritating influence of mercury on the bowels, and subdues the disposition to an irritable state of the general system, or of the local disease. During its administration we must also carefully watch the health of the patient and the condition of his disease, and omit its further use for the time, should any unfavorable symptoms arise. The diet should be mild, and the state of the stomach and bowels attended to. Dr. Wallace recommends the patient to eat a few grains of allspice or pepper during the day, and to cover the abdomen with two or three folds of flannel. Mr. Parker says, that a nightly pill or draught of some preparation of opium with capsicum may be employed with advantage even during the period the patient is using mercurial frictions; the former not only prevents those attacks of pain, griping, and diarrhoea, which sometimes come on during a mercurial course, and materially retard the healing process, but they contribute directly to the therapeutic effects of the mercury.

The aspect of the sore is to be watched carefully, as it frequently points out when mercury does or does not agree with the system. Dr. Wallace says that it will be found a most important rule in practice to omit all mercurial treatment whenever there appears an increase of inflammation or sensibility, to arise in the local disease during the employment of mercury; for a perseverance in its use, under such circumstances, will almost invariably tend to some form of destructive action, determined in its character by the constitution of the patient. In such cases we must have recourse to emollients and anodyne applications, purgatives, rest, abstinence, and diaphoretics, with or without narcotics, and, as soon as the morbid actions which have supervened have been removed, mercury, if necessary, may be again resumed, to be suspended afresh in case of a return either of inflammation or irritability. Should an indolent condition of the sore, and absorption of the granulations, come on during mercurial influence, we must determine the cause and act accordingly.

The quantity of mercury is always to be regulated with the design of deranging the system as little as possible, and patients should be abstracted from all causes of excitement: pytalism, &c., being considered accidental occurrences. Dr. Wallace supports the opinion, that the greater the degree of excitement or of derangement in the functions which mercury produces, the greater is the danger of its

action being followed by deleterious effects, or of its ceasing to influence the symptoms of syphilis in a salutary manner. We judge of the requisite quantity from its effects on the disease, and, in general, it is necessary to affect the gums slightly, and to produce a metallic taste in the mouth; but complete salivation is rarely if ever necessary to obtain all the good effects possible in curing chancres, or preventing secondary symptoms. The cicatrization of the sore, without leaving a hardened cicatrix, should be the rule for discontinuing the remedy. When sores remain indolent, under the continued use of mercury, it may be intermitted for some time, and then resumed in some other form. It is a mistaken notion to suppose that continuing the medicine after the sore has healed, and all induration of the cicatrix has disappeared, will protect the patient from secondary symptoms; these will appear after the fullest course, and yet occasionally they will not appear when not a single grain of mercury has been used. Another point to be borne in mind is, to examine the condition of the mouth previous to the exhibition of mercury, as a state of inflammation or ulceration, with foul breath, might lead us to attribute to the mercury what really depends on other causes.

Iodine.—M. Cullerier thinks that the effects of the iodide of potassium are less prompt than those of mercury, and that, on this account, more should be given, if the stomach will bear it. He employs grain doses of iodine with from two to four of the iodide of potassium in an ounce of water, given at intervals during the day; but he does not increase the iodine beyond two grains in the day, or the iodide beyond ten. I fully believe that the iodide is much more beneficial without the pure iodine, which disorders the stomach without benefitting the complaint. Mr. Stone, formerly apothecary to St. Thomas's Hospital, told Dr. Williams that he was called to prescribe for ten patients taking the compound of iodine and iodide of potassium for one that was taking the last medicine only.

Dr. Wallace found by experience that the iodide of potassium was the only form of the remedy which agreed, that pure iodine was a very powerful irritant, very frequently occasioning severe symptoms, whilst the iodide of potassium was perfectly harmless. Pure iodine, moreover, is converted into hydriodic acid in the stomach. He has seen many cases in which the tincture of iodine, both simple and ioduretted, failed to produce any favorable influence, because the irritation excited in the stomach prevented its employment in such doses as were sufficient to act on the disease, and in these very cases the action of the iodide of potassium was subsequently most beneficial. In other cases, where pure iodine was employed, although the disease was cured, still it was at the expense of an injured stomach, and great emaciation. On the contrary, he asserts that he has never seen unpleasant effects result from the iodide of potassium, except from mismanagement.

Ricord employs the iodide of potassium in gradually increasing doses, commencing with ten grains dissolved in three ounces of dis-

tilled water, and given at intervals during the day, in any suitable vehicle. According to its effects so must the dose be either increased or diminished;—when the remedy agrees, which it always does, if the stomach be healthy, the dose should be increased ten grains every two or three days, till it is carried to one or one and a half drachms, or even more, in the course of the day. The iodide of potassium, in full doses, when it agrees, occasions a sensation of warmth in the stomach, improves the appetite, accelerates digestion, so that many grow quite fat, and quickens the pulse. A constant effect is an increased diuresis.

When pure iodine is used, or the iodide given in excessive quantities, or from idiosyncrasy of constitution, unpleasant symptoms may arise. Sometimes those are slight, and resemble a common catarrh; at others, ringing in the ears and pain in the head, or the skin may suffer from a slight pustular eruption; occasionally it disorders the bowels, or produces pain or uneasiness in the stomach, having some resemblance to pleurodynia, but seated more deeply, and an acrid dryness of the throat. Mr. Mayo says that we may sometimes correct these symptoms by adding a few drops of laudanum to each dose, and by administering aperient medicine. Authors assert that some patients experience ioditic intoxication, characterized by a slight uncertainty in the voluntary movements, some *subsultus tendinum*, heaviness in the head, a species of intellectual idleness, and sometimes slight delirium. Soreness of the gums and pyalism are also said to occur occasionally. Mr. Mayo has heard of effects resembling mercurial erythismus. Should any of these symptoms occur in a severe degree, the dose must be diminished, or even abandoned altogether for a few days, and its exhibition re-commenced in smaller doses.

Dr. Wallace found the urine to be the best test of the effects of the iodide of potassium on the system, by testing it with starch, &c. In some of his patients he remarked a great increase of perspiration—sometimes constipation, salivation, roughness of the throat and heartburn; he found that quinine controlled the state of the throat and stomach. Delicate females, he says, sometimes lose the power of sleeping so much as is natural—a state of wakefulness often accompanied by peculiar feelings of the head, which is relieved by a purgative and interruption of the medicine. Emaciation, great gastric irritation, wasting of the mammæ and testes, &c., only occur from the use of free iodine. In two patients who had drachm doses of the iodide of potassium administered by mistake for one day, there occurred in both sickness, soreness of the throat, colicky pains, vomiting and purging to a slight degree, frequent pulse, and exhaustion, quickly disappearing. Several patients, while under the full action of the iodide, were attacked with an acute pain in the anterior and lower part of the left side, precisely in the centre of the superficies formed by the false ribs, accompanied by some cough, difficulty of breathing and fever. In all, the affection went off without much

trouble. The medicine was omitted and subsequently resumed without inconvenience. In a private patient it produced severe indigestion, a rapid and quivering pulse, headache, and a peculiar condition of the eyes—the pupils were dilated, and both eyes in a state of incessant motion. He was soon after seized with symptoms of paralysis on one side of his body, preceded by muscular tremblings, which remained for three weeks, but eventually passed off.

Ricord states that the good effects of the iodide of potassium have been constant in his practice, but not produced with equal rapidity, in this respect differing from Mr. Mayo, who says that no medicine, where it does good, produces amendment so rapidly; therefore the propriety of continuing it is never doubtful. As far as I have observed myself, iodide of potassium never gives rise to any serious symptom, provided that it be unmixed with pure iodine, and be administered in moderate doses. Apoplectic and paralytic symptoms sometimes come on during the existence of tertiary symptoms, and these are then attributed to the mercury or the iodine which the patient may be using at the time, but it is hardly fair that the whole blame should fall on the remedy. For an adult it is sufficient to commence with five grains of the iodide of potassium three times a day, and increase it gradually to seven or eight. Dr. Williams, while he admits that some constitutions are affected even by one or two grains, thinks that the average dose should be eight grains three times a day; for, says he, a smaller dose can hardly be recommended, for the patient's sufferings are so intense as to require immediate relief, and consequently we ought to begin with as large a dose as his stomach will probably bear. This reasoning is not altogether conclusive, for if the dose be sufficient to excite or endanger unpleasant symptoms, we shall have to stop its use altogether for some time, and then finally resort to smaller doses, which, if used at first, would most probably have removed the complaint without any distress or delay. Dr. Williams remarks, that when mercury has been previously and unsuccessfully used, the quantity of the iodide necessary for the cure of the patient is often much greater than where none has been exhibited.

Review of the comparative value of mercury and iodine in the treatment of syphilis.—If we take a review of what has now been written, we can readily determine the comparative value of mercury and iodine in the treatment of syphilis—that mercury and iodine form the two main remedies on which the best and most unprejudiced treatment of the various symptoms and stages of syphilis mainly hinges, although neither of them should be regarded as a specific, nor can either of them, to be used well and successfully, be exhibited empirically;—that mercury and iodine, when guided by observation, reason, and experience, and combined with such treatment and medicines as the profession would employ were they to lay aside all notions of something specific requiring a blind and specific use of some remedial agent, they stand alone, and infinitely superior to all other medicines which the materia medica can furnish; that a modified use of

mercury is adapted to nearly all the forms, but especially the indurated, of primary syphilis; that in constitutional syphilis a modified use of mercury is almost a *sine qua non* in the great majority of secondary symptoms, but is either hurtful or useful in the tertiary; that iodine is inert in almost all the symptoms of primary syphilis, with the exception of some forms of phagedena, attended with great debility and derangement of the health; that in constitutional syphilis it is a less valuable remedy in the majority of secondary symptoms than mercury, with the exception of some severe cases of pustular eruption, phagedenic throat, rupia, and secondary ulcerations of bad character, all of them marked by a cachetic and debilitated constitution; while in tertiary symptoms iodine is far more valuable than mercury, and its effects more certain and decided than in any other set of symptoms;—that mercury and iodine are most advantageously combined in cases presenting both secondary and tertiary symptoms;—that many forms of mercury, having local or constitutional actions, are applicable to the various symptoms of syphilis, but that the mildest constitutional effect, capable of overcoming the disease, is always to be preferred;—that the only form of iodine safely applicable to the treatment of syphilis, is the iodide of potassium, which should never be carried beyond moderate doses; hence, however valuable the iodide of potassium may be in some forms of syphilis, it cannot be substituted with advantage for mercury in the great majority.—*Edinburgh Med. Surg. Journal.*

Bibliographical Notices.

The First Lines of the Theory and Practice of Surgery; including the principal Operations. By SAMUEL COOPER, senior, Surgeon to the University College Hospital, and Professor of Surgery in the same College, &c. With Notes and Additions, by WILLARD PARKER, M. D., Professor of Surgery in the College of Physicians and Surgeons in the University of the State of New-York, &c., &c. In two volumes, pp. 540, and 531. Fourth American, from the seventh London edition. Published by S. S. & Wm. Wood, New York, 1844.

Of the three Coopers, who have become distinguished during the first half of the present century in the city of London, not the least worthy is the veteran author of the *First Lines*, and Professor of Surgery in the London University. His great work, the *Dictionary of Practical Surgery*, containing, together with the

additions by Dr. Reese, in the American edition, nearly 2500 pages of ordinary print, was sufficient to have transmitted his name to posterity.

Cooper's First Lines of the Theory and Practice of Surgery, was originally designed as an elementary treatise on the subject, and as a text book for students attending his lectures. As this is only an improved edition of a work long and favorably known to the profession, no review of it is expected at our hands. From an examination of the notes and additions by Dr. Parker, we are disposed to think, they have considerably enhanced the value of this edition. We commend it to all desirous of keeping pace with the improvements in Surgery, both theoretical and practical.

The Principles of Surgery. By JAMES MILLER, F. R. S., C. S. E., Professor of Surgery in the University of Edinburgh, Surgeon to the Royal Infirmary, &c. &c. Philadelphia: LEA & BLANCHARD. 1845. pp. 519.

This work is very favorably noticed by our exchange Journals. It was first issued last year in the city, in which the author is a professor, in 12 mo., pp. 716. It is gotten up in a very creditable manner by Messrs. Lea & Blanchard, to whom the profession is so greatly indebted for valuable publications, both original and re-prints. Prof. Miller's work commences with an historical notice of Surgery, in 38 pages. Chapter I., is devoted to Perverted Action of the Blood vessels. Chapter II., to Perverted Action of the Nerves. Chapter III., to Perverted Actions of the Absorbents. Chapter IV., to Suppuration. Chapter V., to Ulceration. Chapter VI., to Mortification. Chapter VII., to Perverted Action in certain Tissues. Chapter VIII., to Perverted Action occurring in Bone. Chapter IX., to Diseases of the Joints. Chapter X., to Diseases of the Arteries. Chapter XI., to Affections of the Veins. Chapter XII., to Hemorrhage. Chapter XIII., to Affections of the Lymphatics. Chapter XIV., to Affections of Nerves. Chapter XV., to Tumours. Chapter XVI., to Wounds. Chapter XVII., to Burns and Scalds. Chapter XVIII., to the Effects of Cold. Chapter XIX., to Fracture. Chapter XX., to Dislocation. Chapter XXI., to Sprain and Rupture of Muscle and Tendon. Chapter XXII., to Bruise.

The reader can now judge of the character of the work, and we fully accord with those who have recommended it, as the best book yet published on the Principles of Surgery.

A Treatise on the Diseases and Special Hygiene of Females. By Colombat De L'Isère. Translated from the French, by Charles D. Meigs, M. D., Professor of Midwifery and Diseases of Women and Children, in the Jefferson Medical College, Philadelphia, &c. &c. Lea & Blanchard: 1845. 1 vol. octavo, pp. 720.

The medical profession is much indebted to Prof. Meigs, for his excellent translation of this valuable work. Some idea may be formed of the immense labor and research of its author, when it is understood that he has cited more than one thousand authorities, and has given the opinions and practical methods of the most celebrated practitioners of ancient and modern times. The notes of Professor Meigs, included within brackets in the body of the text, and constituting nearly one-seventh part of the volume, impart additional value to the work, which we feel no hesitation in saying, should be in the hand of every student and practitioner.

A Practical Treatise on the Diseases peculiar to Women, illustrated by cases, derived from hospital and private practice. By SAMUEL ASHWELL, M. D., London. With Notes by PAUL GODDARD, M. D. LEA & BLANCHARD: Philadelphia, 1845. 1 vol. 8vo. pp. 520.

We are much gratified to see this complete edition, with notes, by Dr. Goddard. With no work are we acquainted, in which the pleasant and the useful are more happily blended: It combines the greatest elegance of style with the most sound and valuable practical information. We feel justified in recommending it, in unqualified terms, to our readers, as a book from which they can scarcely fail to derive both pleasure and improvement. It is truly a model for medical composition. We are pleased to see that Dr. Goddard has not placed his name on the outside of this book. It is humiliating to our national pride to observe so many able and eminent American physicians, whose ambition might well have soared higher, attempting to ride to distinction, upon the backs of transatlantic authors. They should scorn, like satellites, to borrow light from distant luminaries, but in the noble strife for fame, aspire to deck their brows—

“With honors all their own.”

J. A. E.

Remarks on the Influence of Mental Cultivation and Mental Excitement upon Health. By AMARIAH BRIGHAM, M. D., Superintendent and Physician of the State Lunatic Asylum, Utica, N. Y. Third edition. LEA & BLANCHARD, 1845. 1 vol. 12mo. pp. 204.

We are pleased to find that this useful work has passed to a third

edition. Its value is acknowledged abroad as well as at home, the work having been re-published in London, Edinburgh and Glasgow. The facts and reasonings of Dr. Brigham shew conclusively that "early mental excitement will serve only to bring forth beautiful but premature flowers, which are destined soon to wither away, without producing fruit." We commend the book as well to parents and teachers as to physicians.

PART III.—MONTHLY PERISCOPE.

Malformation of the Heart.—The Gazette Médicale of 15th February last, contains the description of an interesting case of malformation of the heart, by M. Aug. Valette, of Strasburg. The subject, Julie Rieder, died at the age of six years and twelve days, from an attack of acute Bronchitis. During the first six weeks of her existence her health was good, and nothing indicated any malformation; but she was then suddenly seized with dyspnœa, accompanied by marked cyanosis of the skin. When six months old an attack of convulsions occurred, which left her right side paralysed. From this she gradually recovered, and enjoyed pretty good health subsequently. The cyanosed condition of the skin persisted till her death, was increased by active exercise, but was always more decided on the side affected with paralysis. The dyspnœa also continued. By auscultation of the heart, a double bellows sound was heard. Intellect normal.

Post-mortem inspection revealed the almost total absence of inter-ventricular septum, the orifices of the aorta and pulmonary artery being separated only by a small spur of the remaining portion of the septum. The aorta was about double the size of the pulmonary artery. The auricles communicated freely with each other by means of the unclosed foramen ovale and of another large opening beneath this. There was but one auriculo-ventricular orifice, which was large, protected by a triangular valve, and which consequently communicated equally with both ventricles. This heart, therefore,

although presenting the vestiges of a double organ, was in reality reduced to the condition of that of the Batracians. Notwithstanding the intimate admixture of the venous and arterial blood which must necessarily have taken place in this case, the individual's life was prolonged much beyond what is usually supposed possible under such circumstances. It is suggested by the writer that the increased cyanosis, manifested in the paralysed side, may be attributed to the slower return of venous blood from this side, and that this fact should probably lead us not to attribute cyanosis too exclusively to the mere admixture of the two bloods in the heart.

D.

Vaccine.—M. M. Dumiril, Magendie, Breschet, Roux, and Serres, having been appointed by the Academy of Sciences, of Paris, a Committee to investigate several questions relating to Vaccine, made a partial Report on the 24th February, 1845, from which we glean the following conclusions :

1st. That rather more than one third of those attacked with small-pox in France had been vaccinated ; and that the proportion of deaths among these was very small. That the results are about the same in England, Sweden, Denmark, Italy, Malta, Geneva, &c.

2nd. That, in general, vaccination insures exemption from variola in a direct ratio with the recentness of its performance. The statistics derived from the various parts of Europe, show conclusively that until nine years after vaccination, children are rarely attacked with small-pox, and that this disease occurs most in such as have been vaccinated ten, fifteen, twenty, or even thirty-five years before. On the other hand, those who have been vaccinated more than thirty-five years, are rarely affected with variola, a fact that may be attributed to the diminished tendency to eruptive diseases in general at this age.

3rd. That vaccination may be regarded as procuring complete exemption from variola for five or six, and even for ten or eleven years. That after this age, and especially during the prevalence of epidemics, a portion of the vaccinated, become subject to the small-pox. And that the majority of the vaccinated are permanently exempted.

4th. That the intensity and protecting influence of the vaccine virus are greatest when it is most recently taken from the cow. And that exemption is not proportionate to the degree of local disease induced.—*Condensed from the Gazette Médicale of 1st March, 1845.*

D.

Scarification of the Gums during Dentition. By MARSHALL HALL, M. D., F. R. S., &c.—There is no practical fact of the truth and value of which I am more satisfied than that of the effect and efficacy of scarification of the gums in infants, and not in infants only, but in children. But the prevailing, I may say the universal idea on the subject is, that we should lance the gums only when the teeth are ready to pierce through them, and only at the most prominent parts of the gums, as the occasion to which I have referred may require; and no idea of this important measure can be more inadequate to its real value. The process of teething is one of augmented arterial action and of vascular action generally; but it is also one of augmented nervous action; for formation, like nutrition, secretion, &c., generally, is always one of nervi-vascular action, and of this the case in question is, from its peculiar rapidity, one of the most energetic. Like other physiological processes, it is apt to become, from that very character of energy, pathological, or of morbid activity. It is obvious, then, attended with extreme suffering to the little patient; the brain is irritable, and the child is restless and cross; the gums are tumid and heated; there is fever, an affection of the general vascular system, and there are, too frequently, convulsions of various degrees and kinds, manifested in the muscles which move the eye-ball, the thumb and finger, the toes; the larynx, the parietes of the respiratory cavities; and the limbs and frame in general; affections of the excito-motor part of the nervous system, and of the secretions of the liver, kidneys, and intestines; affections of the ganglionic division of that system.

What is the precise cause and source of these formidable effects? Can the mere tension and irritation of the gum situated over the more prominent part of the teeth be the cause of such extensive morbid actions? I think not. The real source of these phenomena is in the entire dental system, in which actions of unusual energy and extent are going on—sub-inflammatory they might be called, were they not in reality of an essentially different nature and origin. This undue action takes place in the fangs and sockets of the teeth in their whole extent, with their connections, vascular, nervous, and membranous. But the focus from which the *nervous* actions emanate is, I believe, not as is generally imagined, the nerves of the mere gums seated over the prominent parts of the teeth, but the nerves which may emphatically be termed *the nerves of the teeth themselves*, the nerves which enter into the very fangs and substance of the teeth. *It is to the base of the gums, not to their apex merely, that the scarification should be applied.* The most marked case in which I have observed the instant good effect of scarification was one in which *all the teeth had pierced the gums!*

This view of the subject may assist in removing the futile objection of some who have, without due consideration I am convinced, opposed my plan of frequent, often daily, scarification of the gums, to whom I would say, as my sole reply—Better scarify the gums *unne-*

cessarily one hundred times, than allow the accession of one fit or convulsion from the neglect of this operation, which is equally important in its results, and trifling in its character. And it is not merely the prominent and tense gum over the edges of the teeth which should be divided; the gums, or rather the blood-vessels, immediately over the very *nerves of the teeth*, should be scarified and divided, as you would divide the vessels of the conjunctiva in inflammation of that membrane.

Now, whilst there is fever or restlessness, or tendency to spasm or convulsion, this *local blood-letting* should be repeated daily, and in urgent cases even twice a day. I would here repeat my maxim—better do this one hundred times unnecessarily than have one single fit from the neglect of so trifling an operation. A skilful person does it in a minute, and in a minute often prevents a most serious attack—an attack which may cripple the mind or limbs, or even take the life of our little patient, if frequently repeated. There is, in fact, no comparison between the means and the end, the one so trifling, the other so momentous.

I would refer those who wish to prosecute this subject, to my work on the “*Diseases and Derangements of the Nervous System*,” but especially to my “*New Memoir*,” which contains the most lucid and recent view of the whole subject of the physiology and pathology of the true spinal system, and plates which, for skill in the draughtsman (Mr. Simpson, of Stamford) both that of the artist and that of the physician, and for interest in a practical point of view, have not been surpassed. *Each plate evolves a principle of physiology or pathology of great interest and value.*

I have frequently thought the vascular condition of the gums during dentition might be ascertained by means of a thermometer properly guarded. The results of a series of observations on this point could not fail to possess much value, whilst they would probably suggest a means of diagnosis in some serious disease. I do not pretend, in the above proposition, to have advanced anything new; but in the *locality* chosen for the operation, and in the *promptitude, repetition, perseverance*, and in the *energy and steadiness of purpose* with which I recommend the measure to be adopted—if these be fully apprehended—I believe I do propose something *new*; and when I repeat that since I adopted the plan of *effectually* removing *all* irritation of the gums, stomach, and intestines, in cases of crowing and other convulsions of the same nature, early enough, I have not known or seen a fatal case, I am aware that I propose a plan of treatment at once new and *invaluable*. But half measures are of no efficacy. These remarks do not apply, of course, to convulsive diseases of centric origin.

London Lancet.

The effect of Sulphate of Quinine in diminishing the size of the Spleen.—About two years ago, it was announced by M. Piorry that the administration of a solution of 50 or 60 grains (1 gramme)

of Sulphate of Quinine (in water and a small quantity of sulphuric acid) was attended with a considerable reduction of the size of the spleen, and that this effect could be detected as soon as 40 seconds after taking the remedy. M. Piorry has since repeatedly demonstrated this singular phenomenon in his clinics. M. Gouraud, however, desiring to test the matter more fully, measured carefully by percussion the dimensions of the spleen, and then administered various liquids in the same quantity. He gave, for example, a certain quantity of distilled water with a few drops of sulph. acid, the same quantity of distilled water alone, of lemonade, of wine and water, of herb teas, &c., and in every instance obtained the same results as he did when giving the solution of quinine. M. Gouraud therefore concludes that M. Piorry is in error in supposing that the spleen is really diminished, and that the difference observed in percussing the spleen after the ingestion of liquids is to be explained by reference to the fact, that even a small quantity of fluid taken into the stomach is attended with a considerable evolution of gas in this viscus, and consequently with a corresponding extension of the sonorousness of the splenic region, even amounting in some cases to the tympanitic sound. M. Gouraud insists that this apparent reduction of the spleen may be induced equally whether the spleen be enlarged or in a healthy state, by the same process, a fact which had been stated by M. Piorry also. M. G. has observed that it is only necessary that the patient shall have abstained from drinks for some hours previously, for if they have taken liquids a short time before, the effect will not be induced.

M. Piorry replies that he has repeated the experiments of M. Gouraud without by any means obtaining similar results, and still insists on the correctness of his observations. The subject must therefore be investigated by other and impartial persons, and its importance is such that it is to be hoped that the truth may be accurately established.—*Condensed from the Gazette Médicale, for March, 1845.*

D.

Treatment of Diabetes—by Dr. KEITH IMRAY. I have found tartar-emetic of great value in the treatment of diabetes; it is preferable to James's powder, which, even in the largest doses, is uncertain and produces very little effect; the former remedy given so as to excite occasional nausea diminishes the desire for food, and has also considerable influence in moderating the thirst, and thus, by diminishing the ingesta, is of very essential service. It also has a greater tendency, than any other remedy that I have tried, to promote per-

aspiration, when its use is steadily preserved in, for some length of time. A much greater quantity of this remedy may be taken without producing sickness at stomach when combined with laudanum.

Success in a few cases does not authorise me to draw a strong conclusion. But I am nevertheless much impressed with the belief that residence, in a warm climate, when practicable, conjoined with proper regimen, will hereafter be found to possess greater influence over diabetes than any other remedial means hitherto proposed. The powerful and continued operation of a warm climate, and its simplicity as a remedial agent, give it a decided superiority when contrasted with the many unscientific and uncertain remedies which have been hitherto used to overcome this obstinate and dangerous malady.—*Edin. Med. and Surg. Journal.*

Creosote in a Case of Vomiting—by Dr. JOHN M. BREWSTER, Jr. On Tuesday morning, February 25, 1845, 6 o'clock, I was called to visit a young man (a student in Amherst College) who had been taken ill about five hours previous with the most violent retchings and vomiting. I found the patient vomiting every ten or fifteen minutes. The matter ejected was mostly bilious. As to the origin of all this gastric irritability, I could not learn any sufficient cause. The young man retired the night before with his usual good health. But there was no time to be lost in vain speculations. The patient was rapidly becoming exhausted. What was to be done? I ordered a strong counter-irritant, as hot as the patient could bear, to be placed over the stomach, and began immediately to administer *creosote*. A single drop of *creosote* to an ounce of pure water was the strength of my medicine. Of this I gave a teaspoonful every fifteen minutes till the vomiting was checked. After the fourth dose the intervals between the vomiting began to lengthen, and continued to do so until the stomach became perfectly quiet and natural. The exhaustion and soreness of the parts consequent on such violent action have now nearly disappeared, and the patient is engaged in his usual college duties and calls himself entirely well.—*Boston Med. and Surg. Jour.*

Croton Oil in Dropsy.—Dr. Fife has narrated in the *Provincial Medical Journal*, several cases of ascites, originating from or complicated with, organic lesions, in treating which he derived great benefit from the sustained exhibition of croton oil, which, he observes, possesses one very decided advantage over elaterium, that even when its extreme action is manifested, it is not followed by the depression inseparable from the effective action of the latter; but that where the greatest *vis inertiae* has prevailed, accompanied by absolute incapacity for exertion, a sensible amelioration in these respects has followed its continued exhibition.—*N. Y. Journal of Medicine.*

Tic Douloureux treated by Veratria.—Dr. Le Calvé cites two severe cases of this painful disorder, which were entirely cured by

frictions with veratria ointment. The first is that of a person employed as inspector of a telegraph, who, having exposed himself for half an hour to a very cold air, was a few minutes after seized with violent pains. They proceeded from the frontal branch of the ophthalmic nerve, and radiated over the temple; the eye was injected, and there was considerable spasm of the eyelid, and dread of light. Dr. Le Calvé immediately prescribed the veratria ointment. After the first friction, at the end of a few seconds, the pains ceased with exceeding rapidity. The patient thought himself cured, and was soon asleep. At two in the afternoon a fresh attack came on, which yielded to a friction continued for four minutes. In the evening a preventive friction was made, and the patient passed an excellent night. The next day, about six in the morning, the pains re-appeared; but this time they proceeded from the superior maxillary nerve, at the point where it issues from the infra-orbital foramen, and thence they spread rapidly to the posterior and superior dental branches. A friction which lasted five minutes caused this attack to disappear. It was followed by a few others which always yielded to the same means. From this period, for more than a year, the neuralgia has not re-appeared. The other case was that of a merchant's clerk, about forty-one years of age, of sanguine temperament, who was seized six days after a journey, during which he had exposed himself all night at the coach window, with a violent pain proceeding from the frontal branch of the ophthalmic, and radiating over the temple of the right side of the back part of the head. Dr. Le Calvé found his patient in violent agitation, and uttering piercing shrieks. The right conjunctiva was much injected, the eye was suffused with burning tears, and the dread of light was extreme. There was also a lancinating pain at the bottom of the orbit. The veratria ointment was immediately applied, and the pain yielded to a friction which lasted sixty-two seconds. At two in the morning a fresh paroxysm occurred, which yielded like the former to a friction of two minutes. Fifteen months have elapsed without any return of the neuralgia. In the preparation of the ointment, Dr. Le Calvé gives the preference to rancid lard, as it favors the formation by its acidity, of acetate of veratria.—*Med. Times*.

Epidemic Erysipelas.—Dr. Rognetta states, in the number of his *Annales de Thérapeutique Médicale et Chirurgicale*, for June last, that erysipelas prevails in all the hospitals of Paris. At the Hotel-Dieu, at Beaujon, at St. Louis, and at La Charité, erysipelas, he says, is general. The slightest contusion, the least irritation, the puncture of an abscess, promptly give rise to erysipelas, which often runs a fatal course.

At the Hôpital Vénériens, the disease, in many cases, affects the peritoneum, and terminates fatally. At La Charité, it constantly assumes the phlegmonous form, and is very formidable and frequently fatal. Of four patients recently treated in the service of M. Gerdy,

for contusion of the elbow, every one was seized with severe phlegmonous erysipelas, with sphacelus of the subcutaneous cellular tissue. At St. Louis the epidemic has assumed even a still more terrible form, that of *hospital gangrene*. At the Hotel-Dieu punctures from bleedings, or from leech bites, inflame, suppurate and terminate in fatal plebitis; or they induce erysipelas, which extends to other parts and occasions very dangerous symptoms. Abscesses of little consequence, which at other times would heal in a few days, become a source of phlegmonous erysipelas after being opened, which requires a long treatment and the protracted stay of the patients in the hospital, even, indeed, if they do not fall victims to it.

The treatment has been antiphlogistic in all the hospitals. M. Gerdy has employed deep scarifications; M. Blandin leeches, in great numbers, along the course of the vessels and over any engorged glands which may exist. M. Jobert treats the disease with frictions, with an ointment of nitrate of silver, which he regards as a powerful antiphlogistic, and M. Rognetta says that the disease is *constantly* limited by it. M. Jobert employs the ointment of three degrees of strength, according to the intensity of the disease; the proportions are four, eight, and twelve parts of the salt, to thirty parts of lard. This ointment is copiously applied over the whole part affected with the disease, even the whole body if necessary, which gives to the patient the appearance of a negro, but no injury has ever resulted. M. Rognetta says that he has seen, in the service of M. Jobert, cases of extremely severe erysipelas arrested and cured, as if by enchantment, solely by the use of this ointment.—*Am. Jour. of the Med. Sciences*.

Treatment of Lupus, &c. BY ROBERT LISTON, Esq.—We have to deal with ulcers of the face, and they are of different kinds. We do not often meet with simple ulceration here except from accident. Ulcers in the upper part of the body heal very rapidly; the blood flows freely away, and this is very essential to the healing process. Wounds in the upper part of the body heal in one-fourth part of the time that they do in the lower.

Many ulcers here assume a specific character, and sometimes commence from very slight injury. A man has cut himself in shaving, and the wound has become poisoned, as the saying is, somehow. Some corrosive or irritating stuff has been applied to it by accident or design, the oxide of some metal, such a panacea as brown soap and sugar; or a small softish wart appears, or a little eruption, and from this ulceration takes place. These ulcers arise about the alæ of the nose, sometimes at the corner of the eyes, and sometimes on the cheek. Occasionally they begin as hard tubercles, and go on extending. Perhaps the sore heals at one place and spreads at another. Although these sores are troublesome to the patient and intractable, they can scarcely be looked upon as thoroughly malignant. They may go on and destroy all the parts with which they come in contact; skin, muscles, cartilages, and bones all perish before them. Cases which

are neglected may proceed from bad to worse for a number of years, until scarcely any vestige of the bones of the face or their coverings is left. I have over and over again seen patients who had lost all their features, lips, nose, and eyes; nothing remained but the brain-pun and tongue, and they required to be fed by a funnel introduced over the base of this organ and into the pharynx.

These ulcers have a sharp edge; the integument around them is sometimes slightly tuberculated, and the edges are now and then, as it were, worm-eaten, but there is no inflammation around, they are glazed on the surface, and there is no appearance of granulation in them; they may continue for a great many years, causing the destruction I have mentioned without the lymphatics being at all affected, without the constitution suffering much, and without the disease appearing in other tissues or organs of the body.

These sores, however, may be made to heal by proper treatment, however extensive they may be. We had a man in the hospital lately, an honest dealer in horses, from Yorkshire, who had lost a great part of the nose, the lips, the side of the face, and one eye. The disease had been going on for a great many years; when he came in there was a sore on the cheek as large as the palm of the hand, extending in all directions, but he left with this sore not one quarter that size, and the ulceration was, to a great extent, healed, though not entirely, and it is doubtful whether it ever will be. There being such an excessive loss of substance the remaining soft parts could not come together, so as to assist in covering the void.

Now, this affection, which has been termed lupus, or noli me tangere, or herpes exedens, &c., may be at once put a stop to by appropriate treatment. It has been supposed that internal medicines do good; arsenic is said to be efficacious, but it is by local treatment that you principally succeed. There may be some slight swelling in the part, and the parts underneath may be healed, but whenever you see the edges assume a sharp appearance they must be destroyed by an active escharotic. You may employ arsenical paste, but the constitution is apt to be dangerously affected by it. The best application is the chloride of zinc, mixed up dry, with an equal quantity of flour, and then moistened, by adding a little water to it. It must be mixed up to the consistence of bird lime, and you may spread it on lint; but the better plan is to put it on a spatula, dip your finger in water, and then lay it on with accuracy round the sore, and then over the whole of it. It subjects the patient to some pain, but that ceases after a time, and the paste becomes elevated at the edges. You then find that an extensive slough has formed, and immediately that separates, instead of the old eating ulcer you have substituted a healthy granulating surface, the part furnishes good matter, and there is soon the commencement of cicatrisation all around. This may be done in all stages of the disease; even where the greater part of the features are destroyed you may in this way check the disease; and where the affection is not so far advanced you

may destroy it altogether, and obtain a healthy cicatrix without much deformity.

The chloride of zinc used thus is a most active and effectual remedy, but it causes, as might be expected, severe pain for some hours after its application.—*Lancet*.

Dangers of Surgical Operations.—M. Ballard, Surgeon in Chief of the Military Hospital of Besançon, read (to the Academy of Sciences) a paper in which he endeavors to show that the dangers and accidents consequent on important surgical operations, depend much less on the *mode* of operating than on the treatment before and after its performance. He has observed also that although the regimen may be various, the proportion of deaths does not differ materially; but that in those cases in which a liberal diet and tonics were allowed, the deaths usually occurred from the fifth to the tenth day, whereas it took place between the thirtieth and fortieth day among those subjected to low diet and blood-letting.

The author, in endeavoring to determine the causes of death after surgical operations, enumerates as the most common—the dread of the operation, the pain, the traumatic or suppurative fever, the destruction of tissues by suppuration, and finally, the collection together of large numbers of sick, marsh effluvia, defective ventilation, &c. M. Ballard therefore looks to each of these causes in establishing the indications to be attended to. In the first place, the patient should be kept in ignorance not only of the time of the operation, but also of its necessity, prior to its performance. Secondly, the sensibility should be destroyed or diminished, so as to render the operation tolerable; and this is accomplished by the author by compressing the principal nervous trunks, and the use of narcotics in full doses for several days in succession. Thirdly, the supervention of inflammation should be prevented, by obviating the increase of heat and pain, which may be done by surrounding the limb with bladders filled with water of such a temperature as may be necessary.

By means of these prophylactics, the author says he has diminished the mortality to such a degree that of 28 amputations, (20 being of the lower extremity and 12 of the thigh,) he succeeded in every instance, that is to say, that death did not occur in any case before complete cicatrization, nor during the year following.—*Translated from the "Gazette Médicale," of 15th Feb., 1845.* D.

Lithotrity.—M. Arthault, of Paris, has invented a new instrument by which he can reduce large urinary calculi into extremely minute

fragments in a single sitting. An exhibition of this method was deemed highly satisfactory by the enlightened persons present. The peculiarity of this instrument consists in the substitution of files for the perforating and crushing agents hitherto employed.—*Condensed from the Gazette Médicale, of 22d Feb., 1845.* D.

On the Treatment of Syphilis by Tartar-Emetic.—Dr. Willebrand was induced to make trial of tartar-emetic in the treatment of syphilitic complaints, in the military hospitals, from observing the rapid removal of a blenorrhœa in a patient who was using that medicine for an attack of rheumatism. On trying the efficacy of this medicine on a large scale, he found that urethral discharges were, in general, removed in from six to fifteen, or, at the most, twenty days. It was, however, in the cure of true syphilis that this medicine was found of superior efficacy. Cases of primitive chancre were cured by the internal use of tartar-emetic alone, in from ten to twenty days, no application having been made to the sore but simple water dressing. In a few cases, in which there was much induration of the base of the sore, a cure was not effected. In thirty cases of secondary affection, under the form of ulcerations of the throat, &c., all symptoms of the disease disappeared in from eleven to fifteen days. The tartar-emetic was, however, continued, as a precautionary measure, for five or six days longer, after which the medicine was discontinued; and though two, and in some instances, three years have since elapsed, no relapse has occurred among all these cases. Most of the cutaneous affections rapidly and easily yielded; but some of the more inveterate ones, as the pustular and squamous syphilitic eruptions, required from twenty to twenty-eight days for their removal. In some of these, from the antimony disagreeing, it was requisite to intermit its use.

In all the cases, the tartar-emetic was administered internally in the same manner, viz., half a grain six or eight times a-day. The first doses generally produced vomiting; but by the second day tolerance was produced. When this large dose seemed to disagree, an eighth of a grain was given in the same manner, but then it often failed to effect a permanent cure. Cleanliness, repose, an equable temperature, and regulated diet, were the only adjuvant means used; and Dr. Willebrand thinks that these cases show, that, in very many cases, the tartar-emetic may be substituted with advantage for the more dangerous mercurial treatment.—*Edin. Med. and Surg. Journ., from Gaz. Méd. de Paris.*

Immovable Bandages of Starched Paper for the Treatment of Fractures of the Limbs. By M. LAUGIER.—Bands of starched paper are arranged as in Scultetus' bandage, and form three superimposed layers. The limb is placed upon these, and after the fracture is reduced, the bands are applied. Other bands of paper, also starched, are applied around the foot, and extending up the leg so as

to form a boot, accurately moulded to the part. After drying, which is obtained in twelve hours in summer, and twenty-four hours in winter, by the aid of heated balls or bricks, this apparatus forms a very solid and light mould, which allows the patient to move in bed. Before drying, this bandage is firmer than the ordinary Scultetus': the patient, however, must be perfectly quiet for some hours after its application. It can never be too tight; it is suited to every stage of fracture, even to fractures complicated with wounds. But in the latter case, the limb must be first enveloped in gum-elastic cloth, in a single piece, to preserve the paper from the pus, which softens it. Surgeons who have used this, are pleased with it. It may be employed in all cases to which the immovable apparatus is applicable:—it cannot, however, be used for effecting compression: it is useful principally to secure the immobility of fragments, and painful parts. It commends itself by its lightness and its cheapness; the latter of some importance for poor patients, in the country, and in charitable institutions poorly provided with bandages.—*L'Expérience—American Journal Sciences.*

Encysted Bronchocele.—According to Dr. Bouchacourt, this disease is not seated in the thyroid gland, but in the lymphatic glands situated near it. Of all the methods recommended, injection is, he says, that which offers the greatest chance of success. A mixture of one part of the tincture of iodine with two, three, four, or five parts of water, is sufficiently irritating. It is not necessary to inject a quantity of the iodine solution equal to that of the liquid withdrawn; one-half or one-third is, in general, sufficient, and it may be left in the cyst without inconvenience. The hypertrophied thyroid generally diminishes from the excitation produced by the injection; should this, however, be insufficient, iodine may be given internally and rubbed in at the same time. An appropriate treatment must be administered, according to the constitution of the patient.—*Bulletin de Thérapeutique.*

Pills and Boluses of Copaiba.—To form balsam of copaiba into pills and boluses, Dr. J. F. R. Simon recommends wax. He employs the following proportions, which have been very generally adopted: For pills: liquified white wax, one drachm; balsam of copaiba, two drachms; powdered cubebs, three drachms. For boluses: liquified white wax, one drachm; balsam copaiba, three drachms; powdered cubebs, six drachms.—*Med. Times.*

Preparation and Preservation of Ointments.—M. Deschamps, in "*The Journal de Pharmacie*," has thrown out a suggestion upon this subject which deserves attention. He made many experiments, he says, first, to ascertain whether the several varieties of fat may, in all cases, be used indiscriminately; and, second, whether any means can be devised to prevent fats from becoming rancid, which

must greatly impair their value. He found that an ointment, prepared by heating the buds of the *poplar* in melted lard, is subject to very little alteration by keeping; and it therefore occurred to him that, as this may depend upon a portion of resin extracted from the poplar-buds, a small proportion of gum benzoin might answer a similar purpose. On preparing these ointments and keeping them for several years, he found they had undergone no change, no approach to rancidity. Iodide of potassium is a very excellent test of any acidity in fat. And by this test he found that no admixture with fat tends to preserve it from change so well as benzoin or poplar-buds; the latter produces an orange-yellow colour, but its colour is not affected by long keeping, even mixed with acetate of lead.

Fat or lard, thus prepared with poplar-buds, or gum benzoin, then, is the best possible basis for ointments containing metallic substances, red oxide of mercury, acetate of lead, iodide of potassium, &c.; with essential oils it makes lip-salve, and an application to blisters very much preferable to ordinary ointments.—*London Lancet*.

TO THE READER.

In the original department of this No. of the Journal, will be seen an Article from my respected friend Prof. Dugas, entitled "Remarks on a Lecture on Mesmerism." I here propose to close the whole discussion of this subject; thinking that the pages of the Journal may be more profitably filled with the consideration of matters coming more within the scope of scientific inquiry as conducted on acknowledged and well established principles. Mesmerism is, with me, not worth a controversy, nor can I persuade myself to quarrel with my friend about the mere shadow of so doubtful a substance; more especially as he would have so much the advantage over me; for by "his volition and a few passes," his opponent might be thrown into a mesmeric state and mysterious condition. In the way of *belief* too, I would stand no chance with him. It is not my desire to enter into extended controversy in the Journal on this or any other subject. Viewing Mesmerism in the light I do, I regret the space occupied by it in the Journal; but it was unavoidable—the Editors having been disappointed by the Gentleman who had promised an Article for the 4th No. I feel myself bound, however, to make in passing a few brief notes where I consider the respected author of the Article to have incorrectly stated my meaning; and I do so the more freely inasmuch as I have received from him a private communication stating he does not object to my taking this course.

1st. Jussieu did not, as I have amply shown in my Article, *confirm the report* of the majority of the commission; but though he did not agree to every thing in that report, *he did condemn Mesmer*. I do not repeat the proof of this undeniable fact, but refer to my Lecture in the Journal.

2nd. This whole matter is so shadowy and uncertain to our apprehension, that we are never sure that we have a correct view of its outlines. It did seem to me, however, that the ghostly shape of modern Mesmerism, *so far as it has a shape*, does so resemble that of the Mesmerism of sixty years ago, as to force upon the mind of every common observer the idea of at least a paternal relation, if not an identity. And, in truth, Dr. Dugas seems to have had some such idea himself when he wrote, "admit the facts and I care not a whit for the explanation." If the Mesmerism of 1784, is *toto calo* different from the Mesmerism of 1845, how can the admission of the facts alleged in relation to the former be of any avail to him in the endeavor to establish the latter? We do sincerely acknowledge that we have had great difficulty in getting any definite notion of *what* Mesmerism is, though we have found no difficulty in determining to our own satisfaction what it is *not*.

3rd. The Royal Academy of Medicine, of Paris, in 1825, *received a report, and ordered it to be published, but without discussion and without adoption.* Surely Dr. Dugas is not unaware of the distinction between *receiving and adopting* a report. The Royal Academy *did not sanction the things contained in that Report.* But further, this very Academy in 1837, by a commission of MM. Roux, Bouillaud, H. Cloquet, Emery, Pelletier, Caventon, Cornac, Oudet, and Dubois *condemned Mesmerism.* The same inconclusiveness is observable in the other facts mentioned by my friend. The Royal edict of the King of Prussia, in 1817, does not prove that he believed Mesmerism true. And so of the Academy of Sciences of Berlin—their offering a prize for “the best work on animal magnetism,” is no proof that they believed all its wonders. But even had the Emperor of Russia, the King of Denmark and the King of Prussia, put forth edicts asserting the truth of Mesmerism, what must be thought of the strength of an alleged doctrine of medical philosophy, that has to lean for support upon the authority of the crowned heads of Europe as they existed thirty years ago?

If this is all the extent of fact and all the force of argument that can be brought forward to disprove my positions, I thank my learned friend for the incidental support which I regard those propositions as receiving from his “Remarks.” In truth, those propositions seem to me stronger than before. Truth is always advanced by fair and amicable discussion.

P. S.—Those who may wish to pursue the subject of Mesmerism, are referred to a full expose in the last No. of the London Lancet. PAUL F. EVE.

METEOROLOGICAL OBSERVATIONS, for March, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west Wash.

No.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sunrise.	3, P. M.	Sunrise.	3, P. M.		
1	33	64	29 8-10	29 8-10	S. W.	Fair.
2	44	69	29 8-10	29 8-10	S.	Variable.
3	60	77	29 7-10	29 8-10	S.	Variable.
4	68	72	29 8-10	29 7-10	S. E.	Rain 2-10 inch.
5	56	68	29 6-10	29 7-10	W.	Fair.
6	46	73	30 in.	30 in.	E.	Fair.
7	52	77	30	29 9-10	S. E.	Variable.
8	60	80	29 9-10	29 8-10	S.	Variable.
9	58	80	29 8-10	29 7-10	S. W.	Variable.
10	62	59	29 6-10	29 6-10	N. W.	Rain 3-10 inch.
11	49	58	29 7-10	29 8-10	N. W.	Fair.
12	45	55	29 9-10	29 9-10	N. E.	Cloudy.
13	47	57	29 8-10	29 8-10	N.	Rain 1 inch.
14	49	63	29 7-10	29 6-10	W.	Variable.
15	44	57	29 7-10	29 7-10	W.	Fair.
16	38	60	29 7-10	29 6-10	W.	Variable.
17	45	76	29 5-10	29 4-10	W.	Fair—high wind.
18	47	61	29 5-10	29 5-10	W.	Fair—high wind.
19	37	53	29 7-10	29 7-10	W.	Fair—high wind.
20	33	56	29 9-10	30 in.	N. W.	Fair.
21	33	58	30 in.	30	N. W.	Fair.
22	34	60	30	30	E.	Fair.
23	39	61	30	29 9-10	S.	Cloudy—rain at sun-set.
24	48	52	29 8-10	29 8-10	S.	Rain to 3, P. M., 5-10 inch.
25	38	60	30 in.	30 1-10	N. E.	Fair.
26	33	66	30 1-10	30 2-10	S. E.	Fair.
27	36	72	30 1-10	30 1-10	S. W.	Fair.
28	44	72	30 1-10	30 1-10	S.	Variable.
29	51	76	30 1-10	30 1-10	S. E.	Variable.
30	55	74	30 in.	29 9-10	E.	Variable.
31	56	64	29 8-10	29 8-10	E.	Cloudy.

Quantity of Rain 2 inches. 14 Fair days.

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NEW SERIES.—JUNE, 1845.

[No. 6.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Remarks on Secale Cornutum in Obstetric Practice. By JOSEPH A. EVE, M. D., *Professor of Obstetrics and Diseases of Women and Infants, in the Medical College of Georgia.*

It has been remarked of Digitalis by Dr. Ferriar, "If any person were disposed to write a satire on medical evidence, the different testimonies respecting the properties of this single plant would furnish abundant materials; 'It is a diuretic,' says one physician; 'It has no diuretic power,' says another; 'It is a stimulant,' says a third; 'It is a sedative,' cries another; 'It has no properties at all,' exclaims a fifth." The opinions entertained by the profession with respect to secale cornutum are equally various and contradictory. While by some it is extravagantly lauded as a powerful and valuable agent in obstetric practice, by others it is condemned as a destructive poison; others again regard it to be a totally inert substance, and consider its chief merit to consist in its incapacity to do harm, and ascribe any apparent good results that may follow its administration, to mere coincidence, or to the influence that the mind exercises over the uterus, and profess to believe that any other substance, devoid of all active properties, if given with the same understanding, would answer altogether as well. Even among those who admit that it possesses valuable powers, there is great contrariety of opinion with respect to the particular cases, conditions and circumstances of

cases, to which it is applicable, and also with respect to the variety and extent of its application in obstetric practice.

For the natural and medical history of this article and its pharmaceutical preparations, we would refer, as to the best sources for correct information, to the last edition of the United States Dispensatory, Pereira's *Materia Medica*, *Traité Theorique et pratique de l'Art des Accouchements* par P. Cazeaux, the *Dictionnaire des Sciences Medicales* and the *Dictionnaire de Médecine et de Chirurgie*.

Our design is to treat of the active properties of ergot and its employment in obstetric practice and only to mention, in passing, the modes of administration we have generally found most convenient and efficient. Before proceeding to treat the subject as proposed, it may not be uninteresting or inappropriate to make a hasty and cursory review of the opinions and views of the most distinguished recent obstetric writers.

The late Dr. Gooch condemned ergot in the most summary manner, without a trial. This most reprehensible inconsistency does not comport with the superior judgment and discrimination evinced, by this highly talented author, on other subjects.

"The Americans (says he) recommend the ergot of rye, in doses of a drachm or two scruples, and affirm that the uterus is almost immediately excited by it to a vigorous action. I never used it, neither do I credit what has been said respecting its efficacy."

Dr. Hamilton of Edinburgh, than whom there is no higher authority in obstetrics, objects most decidedly to the use of ergot, after what appears to be a most fair, candid and thorough investigation of the subject, and arrives at the conclusion that "the evidence of the harmlessness of this medicine, when given in moderate doses, is satisfactorily established, that is, that it has no power either to do good or harm." Our limits will not permit us to state the facts he relates, or the arguments he advances, to support his position; we refer the reader to his most excellent "Practical Observations on various subjects relating to Midwifery."

Madame La Chapelle, after having instituted a series of experiments with the *secale cornutum* in the Hospice de la Maternité, at the suggestion of Mons. Chaussier, says, "the medicine has by no means realized the high expectations held out by its favorers, and its chief virtue consists in its producing no bad effect."

Other respectable authorities might be cited who denounce it as inert and useless. On the other hand, in support of the high claims of

this medicine, and in proof of its valuable properties, we might bring forward, were it requisite, a preponderating weight of authority; indeed nearly all of the most recent authors who have written on the subject declare more or less in favor of its usefulness. The late Professor Dewees was one of its most decided and strenuous advocates, although he employed it with much more caution and discrimination than Professor James who was accustomed to prescribe it, with a freedom and fearlessness which few at present would venture to imitate. Dr. Dewees was extremely particular, in limiting the use of ergot to certain specified conditions, and evinced great acumen and judgment in defining the rules and explaining the principles by which its administration should be governed; but notwithstanding he restricts its use so rigidly, he bears the following high testimony in favor of its valuable powers—"I am certain that I do not use the forceps now, where I formerly used them ten times." "And the reason of this abatement, in the employment of the forceps, may I think be fairly attributed to the almost universal use of ergot, by every kind of practitioner of midwifery: and hence I presume that the *secale cornutum* now achieves deliveries that would have required the forceps formerly; for were this not the case, I think I should be called upon, as formerly, to aid labours with these instruments."

Professor Meigs acknowledges its great powers, but appears to entertain such horror of the disastrous consequences to be apprehended from its use, that he seldom employs it except for its hæmostatic properties. "Upon the whole, (says Dr. Meigs,) I must say that I feel far more comfortable and free from apprehensions for the child and the mother, when I deliver with the forceps, than in waiting the result of *secale cornutum*."

Professor Antony held *secale cornutum* in high estimation, both as a hæmostatic remedy, and a promoter of the parturient action of the uterus, but he exercised his wonted good judgment, in defining well the cases, to which he considered it applicable, condemning most severely the indiscriminate and incautious use of so powerful an agent.

Although long known upon the continent of Europe, and, especially in Germany and France, among the common people, as an agent by which the action of the uterus might be increased, and although Desgranges published researches on the subject as early as 1777, and Camerarius published on the same subject in 1708, it owes its general introduction into regular practice to American physicians, and

principally to Dr. Stearns, of New-York, who first published a letter on the subject in 1808; and subsequently, but in a greater degree, to the great influence of Dr. Dewees. In our country there are, now, very few obstetric authors or practitioners who do not acknowledge its great power over the uterus, however much they may differ, with respect to its value and safety in practice, and the principles which should direct and govern its administration.

Notwithstanding the great opposition and prejudice which it had to encounter in Great Britain, Ireland, and the continent of Europe, it has surmounted every impediment against its introduction into practice, and commended itself to the confidence of a large majority of the most distinguished obstetric practitioners, although there is considerable difference of opinion among them with respect to its safety, utility and the principles that should govern its administration.

Burns admits that ergot has occasionally a decided effect in accelerating delivery, but does not appear to have a proper appreciation of its properties.

Campbell, in his "Introduction to the study and practice of Midwifery," speaks of it as one of the acknowledged resources of the art.

Dr. Collins, in his valuable "Practical Treatise on Midwifery," acknowledges the power of ergot in promoting the parturient action of the uterus, and remarks that he has been particularly struck with its sedative effect upon the circulation, in almost every instance in which he has exhibited it.

The late Dr. David D. Davis, in his luminous and voluminous work entitled "Obstetric Medicine," acknowledges himself a tardy believer in its properties, but, contrary to his usual custom with other subjects, says very little about it.

Dr. Blundell expresses himself decidedly in its favor. "In lingering parturition, (he says,) you will frequently find the ergot of invaluable use, for it has, in a high degree, the power of exciting the muscular efforts of the uterus." "After all that I have seen and heard respecting the action of the *secale cornutum*, I think there is no doubt that it has a specific power of stimulating the uterus, provided its muscular irritability be in a state well fitted to receive its impression." Dr. B. does not believe, though he is by no means prepared to deny, that ergot exerts any poisonous influence over the child in utero.

Dr. Rigby acknowledges the great influence of ergot, and some

other substances, over uterine contraction; but he is extremely restrictive of its use during labour and remarks, that "the chief value of these remedies is for the purpose of exciting uterine contractions after labour, and thus to promote the safe expulsion of the placenta, when there is a disposition to *inertia uteri*, and insure the patient against hæmorrhage."

The testimony of Dr. F. H. Ramsbotham is decidedly in favor of the utility and safety of *secale cornutum*, when employed with proper caution and discrimination. "I have (says Dr. R.) given the ergot, in the doses recommended, every four or six hours, for many successive days, on several occasions, and never knew it produce any bad effect upon the mother, except, occasionally, nausea and vomiting. Usually there is no more influence perceptible on the general system than would be obtained after taking a cup of tea; but its effects upon the uterus in labour are often speedy, powerful and astonishing."

Dr. Churchill says—"From repeated trials I can bear testimony to its efficacy, though it is somewhat irregularly exerted; but I must add that I have seen it do mischief."

Dr. Robert Lee remarks of ergot, "there can be no doubt that it occasionally does act upon the uterus, and very violently; but he appears to be more impressed with an idea of the dangers to be apprehended, than of the benefits to be derived, from its use: I have never ventured, (says he,) in either public or private practice, except in cases of accidental uterine hæmorrhage and retained placenta, to administer the ergot of rye to a woman in labour."

M. Velpeau expresses the most decided confidence in the power of ergot to re-excite and increase the contraction of the uterus.

We have already referred to M. Cazeaux for the natural history of *secale cornutum*, and with equal propriety we might refer to his theoretic and practical treatise, for a most excellent account of its therapeutic action. His views are strongly in its favor, both as a mean to expedite labour, and restrain hæmorrhage.

Cazeaux, Chailly, Dubois, F. H. Ramsbotham, and some other authors, consider ergot not only capable of re-exciting, and augmenting the contractions of the uterus, but of originating them at any time during gestation: hence they regard it as a valuable agent, when it becomes necessary to induce premature labour.

M. Moreau, in his "*Traité Pratique des accouchements*," remarks of ergot, "we are of opinion that it is far from being inactive, but that its action is neither so constant, nor so active as many suppose:" he says, "he is far from proscribing it—but rarely uses it."

We have now brought forward the opinions of a number of the most distinguished American and European Obstetricians on the subject of ergot; some of whom we find reject it as powerless, others condemn it as violent and dangerous, whilst others recommend it as an efficacious and invaluable agent in obstetric practice.

In farther testimony of the useful properties of ergot in the practice of midwifery and the treatment of the diseases peculiar to woman, were corroboration necessary, we might adduce the names of Baudelocque, Goupil, Roche, Gardien, Duparcque, Ashwell, Lisfranc, Trousseau, Waller, Ingleby, and Colombat: indeed the catalogue of high authorities might be extended to an almost interminable extent.

It appears to me, if any one were to approach the investigation of the properties of *secale cornutum*, unprejudiced, for or against it, and without any previous acquaintance with it, after carefully weighing and balancing all the discordant testimony and the various opinions of distinguished authors, he would come to the conclusion, that those who found it productive of no decided effect, were very unfortunate in the choice of the article they prescribed, or in the selection of the subjects to whom they administered it, and that as it is generally acknowledged to be a very perishable substance, it must have lost its properties, or the patients must have resisted its influence from some peculiarity of constitution; that on the whole, it is neither so generally dangerous, as some apprehend, nor so invariably safe as others seem to believe; that it undoubtedly exercises great power over the action of the uterus, and consequently, must be as capable of doing injury when improperly used, as of accomplishing good when judiciously prescribed: and we cannot conceive how any person, after examining its properties experimentally, and carefully and candidly observing its effects, could arrive at any other conclusion.

That ergot does possess a peculiar and powerful influence over the uterus, is now too well established to be called in question—an influence that may, with proper skill, be wielded for the achievement of the most beneficial effects, but which, by ignorance and temerity, may be rendered productive of the most disastrous results. A powerful and safe medicine is certainly a solecism, most absurd and ridiculous; the ability to effect good implies the power to do harm.

We will now proceed to give our own views of its effects, and describe the cases to which we consider it applicable, with due respect and deference always to the high authorities from which we may

occasionally differ—a difference which may however be considered pardonable in the most humble, as there is so little unanimity among themselves: If, however, amid so much diversity, and contrariety of opinion, so calculated to confuse and mislead the young, and inexperienced, we may be so happy as to establish any principles, or lay down any rules that may, in any degree, assist our junior brethren, in the employment of an agent so energetic, and consequently so hazardous, our object will be fully attained.

Whether ergot is capable of originating the parturient action of the uterus, before it has commenced, we cannot from our experience determine, never having prescribed it for that purpose, nor known a case in which that result followed its use; but we can readily believe it competent to that effect, from what we have repeatedly witnessed of its influence over the unimpregnated, as well as the parturient womb, and upon the respectable authority, already cited in support of that opinion.

This medicine not only puts into action the longitudinal fibres of the uterus, by the contractions of which, while the circular are passive, its mouth is dilated and its contents expelled, but it stimulates all the fibres equally at the same time to contract, and thus produce an equable and general condensation of the coats of the uterus, contraction and diminution of its cavity, and compression, rather than extrusion, of its contents.

The ergotic contractions differ most decidedly from those of natural labour, in having no intermission between them, consisting in a permanent spasmodic contraction which admits only of slight remissions, but no distinct intervals of ease. This action is so different from the natural, that it is truly astonishing that any candid, intelligent observer could ever fail to distinguish between them and attribute the revival of labour, after its administration, to mere coincidence: It is true that there are exacerbations and remissions of pain, but the uterine globe continues permanently hard and contracted upon its contents: patients themselves readily recognize the difference between natural labour and the action of ergot: it is usual to hear those who have experienced its effects before, when they take it again, say, “now I shall have no rest, nor peace, until the child is born.”

Generally in ten or twenty minutes after it is taken, its effect is manifested; but we are confident, from repeated observation, that this is not invariably the case. In some instances we have known no

effect evinced until an hour or more had elapsed. In one instance of abortion in which it was administered very liberally to restrain hæmorrhage and cause the expulsion of the placenta, but without any apparent influence, its action was so powerfully developed, some hours after its discontinuance, that the placenta was ejected with force some distance below the patient's knee. We could account for this unusual spasmodic action of the uterus, in no other mode, than by attributing it to the influence of the ergot previously administered.

Cazeaux says the action of the ergot decreases in an hour or an hour and a half, and soon ceases, and that it becomes necessary to repeat it, or resort to other means, if the object for which it was given has not been accomplished. This may be generally correct, but not uniformly; it sometimes continues much longer, without any material diminution; and when its influence upon the parturient action of the uterus has subsided entirely, its effect upon the tonic contraction continues with little or no abatement. Dr. Dewees was certainly right in asserting that the uterus is less liable to fall into a state of inertia after being excited to action by the ergot than by other means; an additional dose may indeed sometimes be necessary, after the delivery of the child, for the expulsion of the placenta; but this will not be found generally requisite.

From this view of the mode of operation of ergot, after having given what may be considered a full dose, (3i. to 3ij. of the powder, or from ʒi. to ʒii. of the vinous tincture,) we deem it expedient to wait some hours before any farther administration, unless the indication for its employment be urgent; but when it is clearly indicated, and the demand for it pressing, its administration may be repeated or carried to almost any extent, with as great or greater impunity than any other medicine of the same power.

That it may have produced devastating epidemics, dry gangrene, narcotism, and convulsive diseases, when taken in enormous quantities, or for a very long time, it would be presumption in us to deny in the face of so much respectable authority, although equally good might be cited for a contrary opinion; but we do assert, after having employed it, in cases adapted to its use, very liberally, and witnessed its freer and more incautious employment by others, we have never known it produce on the mother any other bad effect than nausea and vomiting, and these much less frequently, when the wine has been exhibited, instead of the decoction. In this our experience corresponds precisely with that of Dr. Ramsbotham already stated.

The injurious consequences that may result to the parturient woman from the development of its specific action on the uterus, under circumstances unfavorable to its use, will be detailed hereafter. That it often exercises a deleterious influence upon the *fœtus* in utero, when improperly used, is we believe generally acknowledged, but variously accounted for by different authors: some attribute it to a poisonous property absorbed, and conveyed by the maternal blood to the *fœtus*; and Dr. Beatty, in an excellent article upon ergot, published in a recent number of the Dublin Journal of Medical Sciences, goes so far as to lay it down as a rule that it should never be administered, whenever there is a probability that the delivery will not be accomplished, before time may elapse, sufficient for its absorption and transmission to the *fœtus* through the utero-placental circulation, which time he defines to be about two hours. The death of a *fœtus*, exposed for even less than one hour to the violent ergotic action of the uterus, might, we think, be reasonably apprehended and accounted for, without the supposition of the absorption and transmission of a poisonous property through the maternal blood.

We have never seen any cause, nor heard any argument advanced, sufficient to induce a belief that ergot possesses any such property; indeed our experience and observation have furnished us with the most satisfactory proof to the contrary. Formerly, when we employed it with less discrimination than at present, and more recently, when prescribed by others, we have frequently known ergot administered for several hours before delivery, without the *fœtus* having sustained the slightest perceptible injury. Were it necessary to fortify our opinion, by the corroborative support of high authority, many of the most distinguished names might be invoked. That the *fœtus* often perishes in consequence of the untimely and injudicious use of this drug, we would be the last to deny: but we consider it fairly attributable to the mechanical effect of the long continued, unintermittent, violent pressure upon the *fœtus* and the placenta and umbilical cord, chiefly perhaps by impeding or suspending the placento-fœtal circulation, upon the regular performance of which life depends as essentially, during the *fœtal* state, as upon respiration after birth. But besides the suspension of aeration, it may be the consequence of congestion of the brain or lungs, caused by the placenta being so constantly and firmly compressed that, while it can receive little or no blood from the umbilical arteries, more than double the usual quantity is forced through the umbilical vein, thus pro-

ducing dangerous if not fatal plethora in the foetal system. So much injury indeed do we consider likely in this way to accrue to the delicate organization of the foetus, that we are accustomed, as highly as we appreciate the powers of ergot, to abstain from its use, even after the birth of the child, until the cord has been ligated, unless imperiously indicated to prevent, or counteract some greater danger. In some cases, the death of the foetus may, as some suppose, depend upon the placenta becoming detached from the uterus; but we are disposed to believe, when not dependent on an interruption of the placental-foetal circulation, it results from the long continued and severe compression and contusion of important organs, as the brain, lungs, &c. Our views with respect to the effects of ergot upon the foetus, summed up, are, that it possesses no poisonous property, but that, although the child may sometimes escape unhurt after its long continued and often repeated administration, it is always obnoxious to injury from it, at any time before the establishment of pulmonary respiration and ligation of the umbilical cord.

We will now proceed to consider its practical employment, and define the cases to which it is applicable. The therapeutic virtues, and practical utility of this article are becoming more and more developed, and commanding more attention and higher respect from the profession, but more enlightened views of its properties have greatly restricted its employment during labour, while they have much extended its application to the remedial management of the diseases peculiar to females. In this place, however, we will only consider its employment, during the different stages of labour. Inasmuch as it acts equally upon the circular as well as the longitudinal fibres of the uterus, it is never proper in the first stage, that is, until the mouth of the uterus is fully, or nearly dilated, and very dilatable, except perhaps in some cases of excessive hæmorrhages of the accidental kind, and in some cases of violent convulsions occurring early in, or anticipating the commencement of labour. It is a question, doubtful with us, whether even in these cases it is an appropriate prescription: at least we have never met with a case of hæmorrhage, in which it appeared expedient to employ ergot, before the first stage was completed, or considerably advanced, and we are disposed to believe that, at most with very rare exceptions, it would be preferable to defer its use, and endeavor to expedite delivery by rupturing the membranes, and assisting mechanically, the dilatation of the os tincæ, and even if it should be deemed necessary, on account

of the extreme urgency of the symptoms to resort to it sooner, these methods should be practiced simultaneously as indispensable adjuvants. With respect to convulsions occurring during labour, or near the termination of gestation, inasmuch as delivery is always essential to a cure, and ever to be looked upon as the principal, if not sole, reliance for safety to the mother, it might be proper to administer ergot by the mouth if practicable, or in the form of an enema, to originate or promote labour anterior to, or at the very commencement of the process; but we leave the solution of the question to others. Our own practice has been to defer its exhibition until labour was considerably advanced, when we have had reason to be pleased with its effects.

If the first stage be properly conducted, so that while, on the one hand no injudicious interference is practiced, on the other no improper expenditure of strength or waste of time is allowed, artificial assistance of any kind will seldom be required in the second: some cases however do occur, in which, notwithstanding the most skilful management, ergot may be most advantageously used, but many more are to be found, which result from the officiousness of ignorant midwives. Although there is doubtless too often a resort made to ergot, where time and patience are the appropriate remedies, it is equally certain that it has often superseded the employment of instruments to the advantage of mother and offspring.

It has without doubt been prescribed too indiscriminately to expedite delivery in lingering labours. It is certainly a difficult point to determine when to employ it for this purpose. We seldom find it necessary, at any rate, never venture to use it, while the uterus is acting with as much force as it appears capable of exerting; for it is certainly hazardous to excite it to still greater exertion, as rupture of the uterus itself, convulsions, exhaustion, or some other dangerous consequence might very reasonably be apprehended: under such circumstances it is far more rational, if possible, to endeavor to overcome the resistance. If exhaustion should have already supervened, or the patient be approaching that state, from the long continued, ineffectual action of the womb, if it were practicable to re-excite the fatigued organ to renewed activity, it would only be to render the exhaustion more complete, and the fatal result more certain. It is more than probable that, before the supervention of exhaustion, the uterus has already exerted its utmost capacity toward the accom-

plishment of delivery, and that instrumental aid furnishes the only hope of rescue; but there are cases in which the womb, after acting feebly for a considerable time, brings the presenting part to rest upon the perinæum, and all that seems required to terminate the labour, is a little increase in its action, a little more expulsive power. At such a juncture we can see no objection to the administration of ergot, and we believe it far preferable to the application of the forceps, safer for both mother and child.

It is not uncommon at any period of the labour for the pains to subside, without any of the symptoms of exhaustion, affording the patient a temporary respite from suffering. Unless there be an urgent necessity for prompt delivery, it is generally better not to interfere, during this temporary suspension, but to allow her spirits to revive, and strength to become recruited. Should this cessation of the pains occur very near the termination of labour, the patient not exhausted, especially if she should have passed without difficulty through previous deliveries, we would unquestionably prefer the administration of ergot to the introduction of the forceps, or to permitting her to remain long undelivered. It must, however, be remembered that near the close of labour, alarm, or apprehension of the last throes, often frightens away the pains, when hope encouraged will recall them again, which expedient should always be fully employed, before resorting to ergot or any artificial assistance.

Many accidents or complications are liable to occur during the second stage, in which ergot becomes a most invaluable resource. In accidental hæmorrhage, when uncomplicated with preternatural presentation of the fœtus, or mechanical impediment to the delivery, it is a most precious agent, the efficacy of which very few at the present day would venture to call in question. It is equally efficacious in hæmorrhage dependent on partial presentation of the placenta. In complete placenta previa, it is generally inapplicable, as the tendency would be to increase the separation of the placenta, and consequently aggravate the hæmorrhage. It is not proper until after turning (which is the indication in such cases) has been effected, after which it may be very advantageously employed to hasten delivery, should the uterus then not act with energy. We know of one case of placenta previa, in which, contrary to the acknowledged principles of practice, ergot was administered and succeeded most admirably by causing the expulsion of the placenta foremost, and the fœtus immediately after it; such a favorable result, however, could not be safely

calculated on. In our own practice a case anticipated our intention to turn, by terminating suddenly and spontaneously in this way : the ovum was expelled entire, the placenta upon the fore-end, the foetus alive and moving vigorously in the waters. These cases present rare exceptions to the general rule : the alternatives are usually turning or death.

The following case will illustrate the indispensable importance of ergot, in the management of uterine hæmorrhage during labour. At our first visit to a woman on a neighboring plantation, July 12th, 1842, we found her in a state of extreme prostration from flooding, almost pulseless, with cold surface, nausea and vomiting ; she was in the eighth month ; labour, the result of violent exertion, commenced on the 11th, with rupture of the membranes and loss of the liquor amnii ; the os uteri was considerably dilated, but the pains had nearly ceased. Nothing except ergot afforded the slightest ground for hope : an attempt to deliver by turning would in all probability have exhausted the little remnant of life : the system had not energy enough remaining to accomplish delivery unaided ; the vital fluid was still steadily oozing away ; the stomach could scarcely retain any thing ; and there was reason to fear that the loss of blood would be increased by arterial stimulants. In this dilemma we prescribed the wine of ergot, of which her stomach appeared more retentive than of any thing else ; which form was preferred, because the sedative property of the ergot is counteracted by the menstruum. The ergot promoted the tonic contraction of the uterus, sufficiently to arrest the hæmorrhage. By the most extensive and persevering application of sinapisms, reaction took place on the morning of the 13th, and her strength being recruited, by some light nourishment which her stomach became able to receive and by sleep, in the afternoon the labour became re-established, and about 9 o'clock, a foetus, evidently some time dead, was expelled. This patient suffered severe head-ache for some days, in consequence of the excessive loss of blood, but in other respects had a very favorable convalescence. We verily believe without the liberal administration of the wine of ergot, this patient would have inevitably perished ; in such an exigency, all the other resources of the profession would certainly have proven wholly unavailing.

When hæmorrhage of the accidental kind, or from partial presentation of the placenta occurs, after the os tincæ is even two-thirds dilated, ergot is always proper, unless the labour is progressing as rapidly as could be desired, or there should be malposition of the

foetus, disproportion or some other mechanical impediment to delivery. When there is no such counter-indication to its employment, if it should do no good, it can certainly be productive of no injury, for if the uterus be stimulated to vigorous contraction, the delivery will be accomplished, the hæmorrhage arrested, and the necessity for turning superseded. Should it fail to act, it will not render turning, which then becomes the alternative, any more difficult. The exhibition of ergot should be accompanied with the artificial rupture of the membranes, should the liquor amnii not have been already spontaneously discharged.

In all turning cases, after the feet have been brought down and the version accomplished, should the uterus not act with energy, it would be much safer, both for mother and offspring, to stimulate it to renewed action, than to empty it by manual traction, while in a state of inertia or feeble action; for to the mother this would bring the danger of hæmorrhage; to the foetus the danger that, the uterus not pressing firmly on the vertex, the chin would leave the breast, and the arms remain above the superior strait and obstruct the descent of the head.

In breech, knee, or footling cases, the life of the child may often be preserved, by administering ergot near the close of the labour, thus hastening the delivery, and preventing the too long compression of the umbilical cord by the head in its passage through the pelvis.

In prolapsus of the cord, after re-position has been accomplished, or when it is found impracticable, or after turning, should that method be adopted, the expulsion of the foetus should be hastened by ergot, so that the compression of the cord may be of the shortest possible duration.

In instrumental cases, should the uterus not continue to act with vigor, the delivery should never be terminated without the liberal administration of ergot.

In speaking of the employment of ergot in convulsions during the first stage, we have anticipated what we would have said of its use in the second. As respects the mode of administration in convulsions, we prefer the powder in syrup or the decoction as an enema, but after very copious depletion the vinous tincture is a very eligible form.

Dewees, Antony, and some others, to whom the highest respect is due, speak of the excellent effect of the ergot in irregular or misplaced labour, declaring that it often determines the action more

decidedly to the uterus, and renders the labour more natural and efficient, in the first, if we understand them correctly, as well as the second stages. Though our own experience does not comport with theirs, we do not entertain a doubt but that they have met with cases, in which it had or appeared to have that effect; but we have not, and we believe it far safer for the mother and offspring to resort to other expedients, for relieving irregular action and determination of excitement to other organs.

There may be some other occasions in which during the second stage ergot may be advantageously employed, all however are enumerated that are recollected, but writing as we do in the midst of the hurry of professional business, we may have forgotten them, and would be gladly reminded of them, for we would not willingly make any omission.

The third stage of labour is that in which ergot is most frequently required, and upon its effects in which its value chiefly depends. However useful it may sometimes prove as a parturient or promoter of the expulsive power of the uterus, in the earlier stages, it is far more valuable, not only for its effect in promptly expelling the placenta, (rendering the introduction of the hand into the uterus seldom if ever necessary,) but also as a hemostatic remedy, in this stage. Were this position not too generally acknowledged to need corroboration, there would be no difficulty in calling to its support any amount of the highest authority in medicine.

Many authors speak of the excellent effects of ergot in preventing hæmorrhage in patients predisposed to it, or who have in previous labours suffered from it, by administering it a short time before delivery. Whilst we do not doubt the success of this mode of employing it, we believe it would be equally successful in preventing flooding, and safer as respects the child, to give it immediately after the latter is expelled, unless hæmorrhage precedes its birth. We have never had cause to regret not having administered it sooner; indeed so much have we been pleased with the effects of ergot, administered immediately after the birth of the child, when hæmorrhage actually demanded it, and in cases in which it was apprehended, that we have, gradually, fallen into the habit of giving a few drachms of the wine of ergot after every birth, generally after the ligation of the cord for reasons already stated. A case which occurred to us, a few years since, had considerable influence in determining the adoption of this practice more generally: Mrs. —, healthy and robust,

between 20 and 25 years of age, was delivered of her first child after a labour in all respects favorable for a first parturition. After the uterus had contracted down firmly, and the binder had been carefully applied, we left her with injunctions to keep perfectly still, and drink nothing warm. As primiparæ are less liable to flooding than others, no ergot was administered, but some of the wine was left, with the most positive direction to give a tablespoonful and tighten the binder, should the lochial discharge become too free: Our orders, with respect to moving at least, were disobeyed immediately after we left the room, and flooding followed. A very intelligent and experienced relative who remained with the patient, would not believe that she was flooding, so uncommon is it after first births, until the patient became faint from loss of blood and, then in the consternation that ensued, our directions were forgotten, and so much time lost before we were summoned to her assistance, that her life was brought into the utmost peril, and required the employment of the most prompt and energetic measures for its preservation. Since the occurrence of that case, we have never felt satisfied to leave any case, until an hour or more had elapsed after the expulsion of the placenta, without having given a portion of the wine of ergot, and no decided instance of secondary hæmorrhage has ever occurred, in our practice, since the adoption of this rule. Besides the prevention of flooding, and the expulsion of the placenta, ergot, administered directly before or after the birth of the child, by exciting permanently the tonic contraction of the uterus, regulates the lochial discharge, and renders the patient much less subject to after-pains.

On the subject of ergot, Mr. Grantham says, "the ethereal tincture I have found very valuable in suppressing uterine hæmorrhage, and I am in the habit of giving one drachm. in a wine-glass of warm water, to mitigate the after-pains. It relieves the patient better than opium, and without producing any ill effect upon the sensorium commune."

Our object in prescribing a portion of wine of ergot after delivery, is to prevent flooding, or excessive lochial discharge, but we have often observed the most decided influence over the after pains, in those who had generally suffered very much from them, in some instances preventing them altogether, but more frequently moderating and rendering them more tolerable: In some few instances no perceptible effect has been observed, at least some patients have com-

plained as much after taking it, as before, or as they could, if they had not taken it; but it might have been that they had not taken enough, or because some females express as much suffering from a slight, as they possibly could from an intense degree of pain. This effect upon the after-pains doubtless results from the firm and permanent contraction of the uterus, after the expulsion of its contents, and the consequent prevention of the accumulation and retention of coagula within its cavity, upon which after-pains principally depend. After-pains may sometimes perhaps be caused by sympathetic irritation or excessive irritability of the uterus, independent of any contained matter, when of course ergot would be inappropriate for their removal.

In the management of abortion, especially when attended with hæmorrhage, ergot is an inestimable resource: Whenever it has proceeded so far as to have become inevitable, but is progressing slowly, it is far better to give ergot to hasten the expulsion of the ovum, than to leave the patient in a state of protracted pain and suspense, exposed to danger from the continuance or supervention of hæmorrhage; but whenever the patient's life is endangered by the profuseness of the hæmorrhage, it is indispensably necessary in any stage of abortion, although the more advanced the pregnancy is, the more desirable it is that there should be considerable dilatation of the os tincæ, previously to its administration. After the expulsion of the embryo in early abortions, there is frequently retention of the placenta with hæmorrhage: whenever it can be hooked away with the finger or conveniently seized and brought away by the placenta forceps, it should certainly be done; but this will often be found impracticable, and then ergot becomes an indispensable resource, always controlling the hæmorrhage, and sooner or later causing the expulsion of the placenta.

In cases of moles, hydatids, polypi, and all morbid growths and depositions within the uterine cavity, ergot should be employed to effect their expulsion, whenever the diagnosis is satisfactory, or the attendant hæmorrhage sufficient to excite alarm.

Had we not already transcended our prescribed limits, it would be an agreeable task to notice the application of ergot to the treatment of various diseases, especially those peculiar to females. This would itself constitute a theme for an interesting article, which we trust will be adopted, ere long, by some one more able to do it justice, in a communication to this Journal.

We have now, in a hurried manner, and under many disadvantages, expressed our views of the employment of ergot in obstetric practice, for the benefit of those whose opportunities for experience may have been more limited than our own. Should these remarks conduce in the slightest degree to elucidate any of the difficulties and doubts that may embarrass the very youngest of our brethren, our object will be fully attained; but should the experience and observation of others lead them to adopt different opinions, it would afford us pleasure to see them expressed, and to have our own corrected if wrong, it being always more gratifying to us to receive, than to attempt to impart information.

NOTE.—In proof that the *fœtus* in utero is not easily affected by medicine given to the mother, especially narcotics, we would refer to a most interesting article, by Dr. Levert, of Mobile, published in the May number of this Journal, page 225; in which Dr. L. relates a remarkable case, wherein enormous doses of the sulphate of morphine were given twice, and frequently three times daily, to prevent abortion, for a length of time before confinement, with the happiest result both to mother and offspring.

ARTICLE II.

Scraps from my Case Book. By ANDREW R. KILPATRICK, M. D.,
of Woodville, Miss.

The object in writing this paper is not to shew any new theory of disease, or any peculiar mode of treating it; but simply to record facts in pathology, and elicit similar contributions from practitioners of more experience and possessed of better opportunities for observation.

Ascaris Lumbricoides. These animals are so familiar to every person, and particularly every medical man, that the question may be asked, why say any thing on so trite a topic? It is true we are familiar with them, and this familiarity has lulled that watchfulness and hostility which should be exercised towards them. Some physicians look upon the management of such cases with contempt;

neglect them as unworthy a dart from their quiver; leave them to the care of old women, or to riot on the vitals of tender subjects, until they destroy life. And there are persons to be found, even in the medical ranks, who look upon worms as beneficial to the human economy and "blessings in disguise." I, for one, can never view them in that light. But it is also true that there are others who ascribe nearly every distemper to which the juvenile system is liable, to worms, and this hobby causes them to employ anthelmintics in excess, thereby superinducing fatal disease in cases which were at first simple and curable.

CASE 1st. 16th Nov. 1840, I was called to see a negro girl 9 years of age, of small and delicate frame. She complained first on the 10th; on the 12th an emetic had been given, which acted partially. On the night of the 14th calomel and rhubarb each \times grs. was given, producing four operations and the discharge of four large lumbrici at once.

When I first saw her the skin was hot and dry, pulse quick and frequent, though compressible; tongue coated with a thick, yellowish brown fur; some appetite; eyes dull and heavy. She had complained of pain in the umbilical region, but evidenced no uneasiness or tenderness, either by flinching or speaking, or changing of countenance, when the abdomen was pressed by the hand. Prescribed *statim* ol. tereb. \times gutt., ol. ricini $\frac{3}{4}$ s. and an emetic of ipecacuanha in the morning. Nov. 17th: Vespere; the oil had acted only once; the emetic this morning threw up two large lumbrici; fever continues without remission; pulse quick, frequent and feeble; warm and dry skin; tongue still foul and thickly coated. Continue the ol. tereb. in ten drop doses four times a day, and calomel \times grs. at bed-time. Did not see her on the 18th, and was called in haste to her early on the morning of the 19th. Extremities cold; in attempting to swallow tea, she coughed, strangled, and threw it back. She began to sink last night; vomited frequently a dark brown fluid, exactly like the black vomit of yellow fever. She continued to call for tea and chicken water not half an hour before she died. She was repeatedly questioned as to the seat of pain during the two past days, but persisted in saying there was none. She died about 8 o'clock, A. M.

Post Mortem. Cadaver not much emaciated; abdomen full. When the cavity of the abdomen was first entered by the scalpel, a large quantity, fully three pints, of a light straw-colored serum,

gushed out; on laying aside the walls of the abdomen, the entire contents were found to be agglutinated in one common mass by coagulable lymph, and some portions were quite firmly attached to each other. Omentum and mesentery inflamed and gangrenous in places; alimentary canal in its length, externally, highly inflamed, and in many places gangrenous and softened; internally it was inflamed in patches, and the colon not so much as the small intestines. Inspecting these closely, I found in the ileum *an orifice* about the fourth of an inch in diameter through which the fæces had escaped into the peritoneal sac. I suspected the worms had made this, and on examining further I found *two large lumbrici*, one at the base of the spleen and the other under the stomach. Here was the cause of disease and death. I discovered eight other worms in other portions of the canal; three in the stomach and two in the œsophagus, which accounts for the choking and strangling in attempting to swallow. The liver and spleen were sound: stomach externally white; filled with the above mentioned "black vomit;" heart sound; pericardium distended with serum; lungs healthy.

I was astonished at the extent of disease here present, when I called to mind the fact, *that pressure on the abdomen caused no pain*. On counting up all the worms, we found she had discharged twenty-four, and twelve were found in her, which make thirty-six in all.

This case gave occasion for her master to detail to me,

CASE 2d. In the summer of 1837, a negro woman of his fell down in the field "in a fit," as it is commonly termed. She was taken to the house in a state of insensibility, from which she was roused with difficulty, by venesection, stimulants, &c. For some days she continued in a dull, moping condition, quite feeble, with occasional nausea and vomiting. He charged her with "dirt-eating;" she denied, and one morning exhibited a lumbricus which had escaped from her mouth while vomiting. This was a new feature in the case, and he proceeded to treat it for worms, administering ol. tereb. ʒiij. and ol. ricini ʒj., which caused the expulsion per anum of 86 lumbrici in a few hours; next day the same dose was repeated, and upwards of 70 were discharged. She was much relieved, and in a few days was able to work in the field. The next summer she was similarly attacked and similarly treated with the like results. It is often the fact, that accident, as in this case, reveals the true cause of disease.

CASES 3d and 4th. 1844, Aug. 14th.—Called this day to see

two cases of fever, in a negro woman aged 26, and her son aged 10. Both had been seized with fever on the 10th with the same symptoms, and emetics of ipecacuanha were administered to them, followed by submur., hydrarg. and ol. ricini.; and sulph. quin. during the remissions. There was no severity in the symptoms until the 13th, when they both were suddenly taken worse, and at night a passing physician was called in, but discovered that they were beyond the reach of medicine, and told the owners so, although at their solicitation he prescribed for them. When I saw them at 10 o'clock, A. M., 14th, they were moribund, and died within a few minutes of each other, about 12, M. During the afternoon I opened both bodies, proceeding first with the boy's.

Cadaver not much emaciated. On laying open the abdomen the omentum majus was found quite small and as it were wadded down in the lumbar region. Stomach small, empty and apparently crowded into the left hypochondrium by the liver, which was very large, of leaden color, soft and easily torn and broken up by the finger. Spleen was double the natural size, very deep blue color externally, soft, easily ruptured by the finger, and internally presented the appearance of "blood-pudding." Stomach, kidneys and bladder, healthy. The small intestines, jejunum and ileum, were almost empty, containing a little frothy mucus, thin fæces and dead worms, either extended at length or rolled in knots. The principal features in this case were the *intussusceptions*, and to which I wish to direct the thoughtful attention of the reader. There were ten places where one portion of the small intestines and mesentery had slipped into another; some were as much as eight inches, and so firm as to require some force to draw them out. At every one of these places there were two and three worms rolled up in a ball lying at the upper part of the orifice. The canal or passage through these places was so small as to allow only a probe to pass. The small intestines were inflamed in their whole length, and gangrenous in spots. Thoracic viscera presented nothing remarkable.

Post mortem of the woman. The small intestines were the parts principally diseased, being highly inflamed and gangrenous in places; they were also thin, and worms were easily discovered in them; they were also nearly empty. *Intussusception* was also here in five places, where from two to eight inches of bowel were crowded into itself, and a cluster of worms was found at each obstructed place. Nothing of consequence in the other abdominal viscera or those of the thorax

was seen. When the intussuscepted places were extricated they were found completely disorganized.

Now the question arises how was this intussusception produced? Was it owing to the knots of worms joining themselves tightly in the bowels, increasing the vermicular action of those places and causing the superior portion of the bowel to swallow the lower? or were the parts placed in this mal-position by some other cause, and the worms in traversing the canal met these barriers and had there collected? I confess my inability to decide in this case. I observed in many parts of the intestines inequalities in circumference, there being spaces of from one to three inches much smaller than the balance, and it is probable that similar contractions had existed at the intussuscepted places of a more marked character than those I saw, and the superior portions could easily envelope them.

I purposely omitted mentioning the condition of the *colon* in these four cases, because I wish to mention a fact which I observed in all of them, and also in the cadaver of a case of marasmus in a negro child I opened in 1839, and that is, the *contracted condition* of that gut. In all of these cases, the colons were smaller than the small intestines, looking like ropes, all their convolutions and rugosities had disappeared, and the canal was so small as to admit with difficulty the little finger. I have examined many authors, to discover their opinions on the matter, but Abercrombie is the only one who even mentions it. If any one else can account for it, and will do so through this Journal, he will confer a favor on me, and perhaps others.

Another time I will give cases of a different character,

ARTICLE III.

A Case of Procidentia Uteri permanently cured by excision of the Vaginal folds—with remarks. By H. V. WOOTEN, M. D., of Lowndesboro', Ala.

On the 12th of July, 1838, I was called to Betty, a negro woman, aged about forty-five. I found her greatly emaciated, and so feeble as to be unable to assume the sitting posture without assistance. Her features were shrunken, her countenance anxious, her pulse extremely

frequent and feeble, and as her complaint was represented to be diarrhœa, I viewed it as a hopeless case. Her owner had misunderstood her case, and on further examination I ascertained that she was afflicted with procidentia uteri, which for six weeks past had been attended with profuse leucorrhœa. She stated that for eleven years she had "falling of the womb," that during all this time she had been subject to recurrences of the leucorrhœa, and that her general health had suffered much, until she now seemed reduced to the lowest extremity of existence.

On inspection, I found the uterus and everted vagina protruded entirely without the vulva, and forming a tumor of about five or six inches in length. Its surface was generally of a blanched and relaxed appearance, but there were on each side, and nearly opposite each other, two projections or tumors, about the size of a man's thumb and about as long, with a slight swell in the middle, one extremity of these ridges arose within half an inch of the os uteri, and one of them ran a course slightly diagonal to the main tumor. They were very hard, with a glossy surface and of a livid hue. They seemed to be composed of the folds of the vaginal mucous membrane and their inter-cellular tissue in an advanced stage of inflammation. On the posterior surface, and about an inch from the os uteri, was an ulcer of oblong shape and about the size of a half dollar, and of an indolent appearance. The patient stated that about four days previous, a "lump" similar to those described, had sloughed from the seat of this ulcer.

I attempted a replacement of the prolapsed parts, but found it impracticable. I ordered the application of sol. lunar caustic to the ulcer, an emolient poultice to the parts, the free use of nourishing liquid diet, and carbonate of iron in large doses three times a day, with a view to promote general strength.

I saw the patient again on the 14th—Condition about the same as at the first visit, except that the ulcer had a more healthful appearance, and the general strength of the patient was slightly improved. Still the prolapsed parts were irreducible. The propriety of excising the folds of the vagina, as recommended by Dieffenbach, was forcibly suggested by the peculiar state of the case; so I proceeded at once to the operation. After making the necessary preparations of position, &c., I excised the tumors above described, at their bases, aiming to remove the entire fold with the engorged cellular tissue, and at the same time avoid wounding the outward coat of the vagina, which I

found no difficulty in doing. The operation gave scarcely any pain, and the hæmorrhage was inconsiderable.

After removing both folds, or tumors, and bathing the parts with a strong solution of chloride of soda, I returned the uterus to its proper place without further difficulty. I used no sutures, as I could see no necessity for them. I had the patient placed in a recumbent position with the hips elevated, ordered a continuation of the nourishing diet with carbonate of iron, and a solution of chloride of soda to be thrown into the vagina twice a day. For this purpose I used a large gum elastic catheter, attached to a small enema syringe, fearing that the size of the common female syringe would interfere with the process of cicatrization. This course was continued with regular improvement of the patient for six days, when, the leucorrhœal discharge continuing, an infusion of nut-galls was thrown into the vagina once a day in addition to the chloride of soda. The patient was kept in the recumbent position, strictly, for four weeks, when, with a compress to the hypogastrium and bandage around the hips, she was allowed to get up. By this time she had measurably regained her flesh, and was very soon able to attend to domestic business, without any symptom of her old complaint.

I saw her in March, 1845, when she stated that she had not had the least trouble with the disease since the operation.

I have had but two opportunities to perform the operation since this case, and they were in women within the child bearing period, and I refrained, lest it might interfere with the process of parturition, should the patient become pregnant. All authors who have recommended this operation, have, so far as I have seen, observed this caution; but Mr. Crosse mentioned that Dr. Fricke had reported a case to him in which the patient had become pregnant, after the operation, and "was delivered by the forceps without the artificial bridge giving way." After the child-bearing period, however, there can be no doubt that this will be found a safe and highly successful operation.

By reference to writers on this operation, I notice that there are two plans proposed and practised for performing it—for in principle they are but the same operation—the one to excise the folds of the vagina high up, and the other to cut and produce adhesion at the base of the labia. It seems to me, that in most cases the former would be preferable, because the "artificial bridge" or cicatrix is higher up, and better calculated to support the uterus in its natural position, and because the part operated on is less sensitive, giving the

patient less pain in the operation, and subsequent treatment.

I used no sutures in this case, because I expected the edges of the denuded surfaces to approximate spontaneously, and moreover, the object of the operation, as I conceive, is not so much to contract the vaginal canal, as to lessen its dilatability. The smallness of the vagina would offer but little obstacle to the descent of the uterus, if the dilatability remained excessive. A cicatrix is the important object in this plan of treatment, on account of the firmness it imparts to the support of the uterus, and this I expected to obtain as well without as with the sutures. The first case of permanent cure which suggested the operation to Dieffenbach, was by sloughing of the vaginal fold, where of course, no sutures were used, and he says that, in his operations he frequently used none at all, as "the edges of the wound frequently came in close contact with each other, after the reposition of the uterus." Whilst the sutures can do no harm, except a slight increase of irritation, there can be but little doubt, that operations of this sort will generally do as well without them.

The greatest possible caution should always be used to prevent the descent of the uterus while the healing process is going on.

ARTICLE IV.

Hogs Lard a Remedy for Obstructions of the Bowels. By J. A. MAYES, M. D., of Bradleyville, Sumter District, S. C.

The aim and object of the medical profession is the relief of human suffering; and, as this object can be best accomplished by individual members of the profession freely communicating to each other, the results of their experiments with the resources of our art, and thereby placing the knowledge of one at the disposal of another, no other apology, it is hoped, will be required for the obtrusion of this article upon public notice.

The bowels frequently become so much obstructed by indurated fæces, that the best directed efforts of physicians to overcome the obstruction, often prove useless, and even worse than useless, since the means we use for relief, if they fail, are apt to aggravate the mischief, by producing inflammation, and consequently, the chance of

saving the life of our patient is lessened. For such conditions of the bowels we have many remedies already, and the list is gradually lengthening; but, occasionally, all the usual resources of art within our reach have been used, and yet our patient has not obtained relief. Such a case as this occurred in my practice a few days ago. Every means in my power had to be called into requisition in this case; and my patient recovered, at last, under what I believe a very unusual course of treatment; at least, a plan of treatment which must be very rarely employed, as I see no mention made of the successful remedy in medical works in such cases, and have never heard of a similar practice being adopted by any one. I, therefore, make this communication, believing that a slight addition will be made, by it, to the general stock of medical knowledge.

CASE. George, a negro man, aged 30, a tailor by trade, was, on Thursday 10th April, 1845, attacked with very violent pains in the bowels, resembling spasmodic colic. For his relief, Dr. Muldrow, his owner, prescribed purgatives combined with opiates, blisters, enemata, &c., without much benefit. Very small discharges from the bowels could be obtained, and these, not without repeated enemata. His symptoms being more severe on Saturday morning, the 12th, I was requested to visit him. I found him suffering very acute pain throughout the abdomen, but especially severe on the right side; his abdomen was tumid and hard; complained very much of the slightest pressure; breathing, hurried; *pulse, soft and regular; has had no fever since his attack; pain occasionally remitting, but soon returning with as much severity as ever*; had vomited a great deal: for twelve months past has been rather constipated, and had had two or three attacks of colic lately, but none of much severity; being soon relieved by purgatives. The existence of enteric inflammation in this case was thought probable; but the symptoms and the history of the case were such as to incline us to the opinion that spasmodic colic was the cause of his sufferings. In consultation, it was determined to administer calomel 10 grs., Dover's powder 20 grs., every three hours—mucilaginous drinks to be used freely, and purgative enemata to aid the operation of medicines.

Sunday morning, 13th. George does not complain so much of pain this morning; the medicines taken by the mouth had caused vomiting of fluids in very large quantities, mixed with some stercoraceous matter. The enemata had the effect of cleansing out the lower bowels only; the two or three last having been discharged in

the same state as when injected. His pulse still remains soft and regular, with a little fulness—no fever; constant hiccup. Directed the calomel and Dover's powder to be continued; enemata of castor oil and spts. turpentine every two hours: to be kept in the warm bath up to his chest until his pulse becomes affected.

Sunday evening. Constant stercoraceous vomiting through the day—no discharge at all downwards, the enemata coming away without even a fecal odour; the pulse and other symptoms the same as in the morning. As purgatives by mouth seemed to increase the stercoraceous vomiting, the Dover's powder alone, in doses of 10 grs. every two or three hours was directed. 10 or 15 grs. tartar emetic, dissolved in a pint of warm water, was directed as enemata, to be repeated *pro re nata*.

Monday morning, 14th. The stercoraceous vomiting still continues, and is worse than ever, the matters vomited being large in quantities and of a pea green color; no discharge downwards—the tartar emetic enemata were several times repeated, but had no perceptible effect. Other symptoms as before. Directed 4 grs. ext. hyosciami every three hours—infusion of tobacco as enemata—cataplasm of tobacco over the blistered surface on the abdomen—the enemata to be repeated *pro re nata*.

Monday evening. The vomiting has ceased since 10 o'clock; but the tobacco, twice used, produced no other effect than very great prostration; not much pain in the bowels and the distention of the abdomen not so great. Directed injections of cold water, to be frequently repeated until nine or ten pints should be thrown into the bowels. Ext. hyosciami as before.

Tuesday morning, 15th. Has had no return of the vomiting—the injection of cold water had come away scarcely colored: pulse and other symptoms about the same as before—a small quantity of sol. veratrini was injected into the rectum, to produce, if possible, a determination downward, but with no perceptible effect. As no instrument for passing fluids high up the intestines, could be procured, we were at some loss how to proceed.* In consultation, it was agreed

* We have been in the habit for some years of passing a gum elastic stomach tube into the colon, in all cases of colics, through which a large injection of salt and water, or other fluid, may be easily thrown up into the large intestine, with a common syringe. There is neither difficulty nor danger in the introduction of the tube, and in no instance have we ever known an enema administered in this mode to fail in giving prompt and effectual relief. So uniformly successful is this mode of treatment, that we have pretty much ceased to give any medicines by the mouth in such cases.—Edrs.

to fill his bowels, by mouth and by rectum, with some bland oil, and afterwards administer some drastic purgative. For this purpose, none seemed to be better adapted than melted hogs lard. A large tea cupful of melted lard was immediately administered, and directed to be repeated in three hours—with enemata of one pint melted lard every hour. The ext. hyosciami to be continued as before.

Tuesday evening. Has had no return of the vomiting, but the stomach seems oppressed by the lard swallowed; no pain, pulse very good. The last enema of lard had a very strong fecal odor when discharged. Directed the lard enemata to be repeated every hour—another tea cupful to be taken at night—a pill of morphia at night.

Wednesday morning, 16th. We were, this morning, agreeably surprised to find a large discharge from the bowels; the stomach no longer oppressed by the lard swallowed; no hiccup; our patient's countenance brightened very much—no longer the sunken eye, the haggard look, the image of despair. We resolved to push our remedy still further—another tea cupful was administered and the lard enemata repeated every two hours—with morphine in small doses every three hours.

Wednesday evening. Very large quantities of feces mixed with lard are now discharging from the bowels; no uncomfortable symptoms about the bowels at all; a small dose of castor oil was now given, directing it to be followed by a lard enema, if it does not operate in four hours. Morphine to be continued.

Thursday morning, 17th. The castor oil operated largely, in two hours after being taken, bringing away much fecal matter and about a quart of lard. Directed nothing more to day than light nourishment with mucilage of slippery elm—morphine as before.

Friday morning, 18th. Feces mixed with lard are still being discharged from the bowels, but not in such abundance as before. A pill of morphine was directed night and morning for a few days—light nourishment, aromatic tonics and aperients when necessary.

After this my attendance upon George ceased, and he was left under the management of his owner. He is now rapidly convalescent, and will soon regain his former health.

It is the opinion of Dr. Muldrow and myself, that the favorable termination of this case was brought about by the hogs lard, when nothing else would have been of service. The details of treatment have been given, to convey some idea of the nature of the case; and whoever studies the case with attention, must arrive at the same

conclusion. Other means, it is possible, may have been used with success; but none, we venture to affirm, could have acted so effectually as the hogs lard, without producing some inflammation of the bowels. Being a mild aperient, and, at the same time, a suitable article for lubricating the bowels, nothing could have been better adapted to the case. Our patient took altogether, by mouth and by enemata, a gallon and a half or more of melted lard, without any inconvenience at all resulting from the use of such a prodigious quantity of oil in his bowels—a circumstance, which could have resulted from the use of no other remedy in similar quantities, and which, the writer believes, will cause hogs lard to be elevated to a more honorable position in the materia medica than it has hitherto occupied.

In conclusion, I would respectfully invite the attention of practitioners generally, to this subject; and hope, should cases similar to that reported occur in their practice, the remedy here treated of may have a trial. One case does not establish the utility of any article—several are required, and I hope soon to hear of hogs lard being used successfully in several cases of obstructions of the bowels.

ARTICLE V.

Report of a Case of Tubercular Development, occurring in a Child under one year of age. By H. F. CAMPBELL, M. D., Demonstrator in the Medical College of Georgia.

Inasmuch as there are comparatively but few cases on record wherein tubercular disease occurs in subjects under a year old, as is shown by all tables of mortality from phthisis, (the majority of authors estimating the disease as occurring in subjects over fifteen years of age and upwards,) I would subjoin the following one simply with the view of corroborating the principle that consumption can occur at that early age, by adding one more to the small number of cases now on record. Dr. Cless, of Stuttgart, in a recent publication on the presence of tubercles in the different organs, in a January No. of the *Gazette Médicale de Paris*, cites twenty children with tubercles in the lungs, but one was under three years of age. The tables also of Bayle and Louis show their estimates to have been taken from subjects between 15 and 70 years of age.

The case now under consideration was that of a mulatto female child, the off-spring of parents very young, the mother being a mulatto girl about 15 years of age, of a strumous habit. The child from birth had been unhealthy, evincing a remarkable susceptibility to cold, manifested by repeated attacks of pneumonia and pleuritis—its digestive organs were also frequently deranged—some months previous to its death it had been affected with oppressed respiration which together with hectic and other marked symptoms of pulmonary disease, led Dr. Joseph A. Eve, the attending physician, to diagnose the existence of tubercles. Throughout its whole existence the above symptoms were accompanied by an irritative, feeble cough, without much expectoration, and by the manifestations of the child, he had reason to suspect on certain occasions that it suffered an acute pain in the region of the right lung. Pulse feeble and very rapid; within from 25 to 30 days of its demise, there could be distinctly felt through the abdominal parietes many rounded projections of variable dimensions, apparently attached to the posterior wall of the abdomen—its bowels had been, and from the present till its death were, affected by a colliquative diarrhœa. On the 6th of February, 1845, it died in a typhoid state, from exhaustion and suffocation. Autopsy, made in presence of Drs. J. A. Eve, Low, and others, about 14 hours after death. Emaciation extreme.

On opening the thorax, I find the *left pleura* very nearly sound and of natural color, there being no adhesions and but little effused fluid in its cavity. The *lung* though crepitant, not entirely free from disease, there being at its base innumerable greyish points of various magnitude, the radicles of crude tubercles, some of which are distinguishable through the *pleura pulmonalis* opposing the superior surface of the diaphragm.

The *right pleura pulmonalis* adherent to the *pleura costalis* and *pleura diaphragmatica* throughout their whole extent by half organized lymph, being in some places one-fourth of an inch in thickness while in others the adhesions of the *pleura* are immediate.

The *right lung*, throughout its whole extent, is occupied by *tubercles* in every stage of development, and in the lower lobe is an abscess about three-fourths of an inch in diameter, filled with pus, there being also a smaller one in the middle lobe.

Only at the apex does there exist the least crepitus whatever, while the remainder of the lung is in a state of complete *tubercular* hepatization. Heart and pericardium natural.

On opening the cavity of the abdomen, the stomach is found in a normal condition.

Small intestines at particular places somewhat contracted, though no intussusception.

Large intestine, sound.

Mesen'eric glands, throughout the whole extent of the mesentery, enormously enlarged, many of them to nearly the size of a walnut, while in some few I can plainly recognize matter bearing a close analogy to *tubercular degeneration*. Liver sound, with gall cyst empty. Spleen atrophied. Kidneys sound. Pelvic viscera unexplored.

REMARKS. The development of tubercles in the above case, was favored by two circumstances to the predisposing influence of which is due perhaps more important consideration than is in general accorded them—namely: the extreme youth of the child's parents, and still more, the fact that it did not claim its being wholly from either the Caucasian or African race; either of which, daily observation inculcates, is by far better calculated to resist pulmonary and strumous disease than the truly unnatural being, the mutual offspring of these two races so eminently differing from each other in many essential particulars of habit and constitution.

NOTE.—In corroboration of the paucity of cases on record of tubercular development in infants producing death, we observe in the 9th vol. of the Medico-Chirurgical Transactions, London, a tabular view of the seat of tubercle in 180 cases of children, of which number not one was under 19 months.—Edrs.

PART II.—REVIEWS AND EXTRACTS.

Treatment of Syphilitic Diseases by Iodide of Potassium. By H. GOURAUD. *From the Journal des Connaissances Médico-Chirurgicales, March, 1845. (Translated for this Journal.)*

Doctor Coindet, of Geneva, who first introduced Iodine into therapeutics, (after its discovery, in 1811, by M. Courtois,) published, in 1820 and 1821, three articles in which the use of this substance was recommended in goitre, scrofula, and in some other diseases. M. Coindet even foresaw from the beginning the probable utility of the new medicine in certain forms of syphilis.

Twenty-five years only have elapsed since the therapeutic origin of iodine, and at the present day it is extensively employed and forms one of the principal agents in the practice of a great number of physicians. All are acquainted with the excellent researches of M. Lugol upon the powerful action of iodine in scrofulous affections, and know the immense extent of this class of affections in all their visible forms, and in their more or less appreciable transformations. If to the great class of scrofulous diseases and of their numerous degenerations, we add that of syphilitic affections with their different varieties in which iodine produces so many marvellous effects, we embrace at once the majority of cases in which the use of this medicine is indicated. Formerly Bordeu considered scrofula, or at least certain forms of it, as being primitively of a syphilitic nature: this opinion has been recently revived by M. Ricord, and certainly deserves consideration; it does not exclude the important opinion of M. Lugol respecting the very great power of hereditary influence, nor that of M. Baudelocque, who, without denying its hereditary character, places first among the causes of scrofula the respiration of vitiated air. These opinions do not conflict, but all of them seem to be true in practice. Bordeu, believing in the syphilitic origin of scrofula, sometimes cured the disease by a mercurial treatment; and does not the success which at the present day so frequently attends the treatment of scrofula and of syphilis by iodine, prove an affinity between these two affections?

Iodine is now very frequently employed as an anti-scrofulant, an anti-syphilitic, a tonic, a stimulant, an alterative, &c. Does it not

occupy at the present day the position formerly enjoyed by mercury? For some time a great number of poisonous effects were attributed to its use, and the Germans have even described a particular disease produced by the administration of this substance; but at the present day it is employed without fear, and in considerable doses. We believe that the reputation of iodine is now permanently established. We have seen it act so beneficially under desperate circumstances, and derive so much advantage from its use in our daily practice, that we regard it as an heroic and special medicine: we also think that it is generally well tolerated by patients, (with some rare exceptions,) and that it may be given in large doses provided the general laws of therapeutic toleration are observed. We do not however design to write at this time the therapeutic history of iodine—we only desire to call the attention of our readers to a very interesting work of Doctor Gauthier, of Lyons, upon the treatment of syphilitic diseases by the iodide of potassium. In 1823, M. Ricord Des Brus employed the tincture of iodine in blennorrhagia and in buboes: subsequently M. Eusébe de Salle made similar trials; and also M. Lallemand, of Montpellier, in 1826. It is, however, to Doctor Wallace, of Dublin, that belongs the honor of having first employed the most suitable preparation of iodine—the iodide of potassium: of having administered it in doses much larger than those formerly given, and of having distinguished those cases of syphilitic affection in which this medicine is most efficacious and in which it should be preferred to mercury. He made his experiments from 1832 to 1836, and disclosed the results in his clinical lectures which were published in 1836. Subsequently other English physicians, viz: Doctors Robert Williams, Judd, A. Saville, Winslow, and Bullock, have verified the results announced by Doctor Wallace. In Germany, Doctor Elbers, of Breslaw, and Doctor Kluge, of Berlin, have recommended the same practice. Finally, in 1839, M. Ricord, in France, published upon this point a very interesting article. The use of this medicine is now universal; facts abound in its favor, and the iodide of potassium may be cited as a specific in the obstinate cephalalgia dependent upon syphilitic exostoses, in the same way that quinine is cited as a specific in intermittent fevers.

We believe that pure iodine united with the iodide of potassium, and administered according to the method of M. Lugol, is more easily tolerated than some physicians pretend, and that the toleration is greater in those cases in which it is properly prescribed. It must be

confessed, however, that some patients either will not bear the article, or will not tolerate a gradual increase in the dose. It is also true that it exerts upon the testes and upon the mammary glands an atrophic action which must be regarded as an inconvenience. But the iodide of potassium administered alone does not produce these bad effects. Wallace, in 1836, ascertained by experiment and by clinical observation that the irritating quality of iodine does not exist in the iodide of potassium, or at least only in a very feeble degree. "If we introduce," says he, "pure iodine into the stomach of a dog, the mucous membrane is soon found inflamed, altered in its color and ulcerated, but if we introduce an equivalent or greater quantity of iodide of potassium, the stomach undergoes no alteration."

The same thing is true with respect to its atrophic action. Wallace, M. Ricord, and Doctor Kluge, of Berlin, have never observed the absorption of the mammary glands; nor of the testes, nor emaciation, although they have practiced in large hospitals. The observations of Doctor Gauthier have for several years confirmed upon this point the experience of the physicians of Dublin, Paris and Berlin, whom we have just cited. We believe that this fact is established by daily practice, and we hear fewer complaints against iodine and its preparations, since the exclusive administration of the iodide of potassium has been so generally adopted.

The augmentation of the urinary secretion is one of the most remarkable and constant effects produced by the use of the iodide of potassium. This phenomenon arrested in a particular manner the attention of Doctor Wallace, who derived practical inferences from it. The iodide of potassium is found in considerable quantity, not only in the urine, but also in all the excreted fluids, and this explains the reason why it may be administered in large doses without producing injurious consequences.

M. Ricord has described in a very complete manner the effects of the iodide of potassium upon the economy. In a memoir published by him in 1841, he says that this remedy produces frequently upon the skin different kinds of eruption which resemble pyoderma, acne or ecthyma, and which are sometimes simple erythemoids; that it frequently causes a species of salivation; that it increases the urinary secretion; that it causes often a vascular injection, with tumefaction of the conjunctiva; that in many cases also may be observed, under its influence, a peculiar kind of coryza, and a bronchitis characterized by a well marked embarrassment in respiration. M. Ricord also

includes among the phenomena caused by this substance, cerebral congestion and a species of intoxication, and also spasmodic movements and twitchings of the tendons.

Some of the phenomena mentioned by M. Ricord have not been observed by M. Gauthier, but he administered the iodide in smaller doses than those used by M. Ricord. Almost the only phenomena which he perceived to obtain with constancy were, increase of the appetite and of embonpoint, the coloration of the tissues, and the more abundant secretion of the urine.

The iodide of potassium has been employed, and with good success, in the primary symptoms of syphilis by several physicians, but as these primary symptoms disappear sometimes only by the observance of cleanliness, and by an antiphlogistic regimen, facts of this kind are rather deficient in value. But it is especially in the secondary and tertiary symptoms that the curative power of the iodide of potassium has been recognized. The patients treated by Doctor Wallace were affected with iritis, testicular engorgements, nodes and other affections of the fibrous, synovial and osseous systems, with cutaneous eruptions, and with diseases of the mucous membranes. M. Ricord insists much upon this distinction, that mercury is more suitable in the secondary symptoms, and the iodide of potassium in the tertiary symptoms; and that in general, in proportion as syphilis comes to be transformed and its symptoms become tertiary, mercury loses and iodine gains in efficacy.

M. Gauthier has found the iodide of potassium useful in the tertiary and secondary symptoms of syphilis: he has seen the most intolerable pains of the bones cease in a few days; he has seen caries very promptly modified—ozena, with caries of the bones of the nose and perforation of the palatine arch, almost always cured; the gummy tumors, the deep seated tubercles of the skin and mucous membranes, and periostitis, also cured. The iodide of potassium has not appeared to him to be suitable to all cases of the syphilides. "In the exanthematous, papular and squamous syphilides," says he, "its use has produced, in general, no effects, or those which were only slightly advantageous; but in the ulcerated tubercular syphilide, in that especially which is called by M. Cazenave perforating tubercular syphilide, in the vast ulcerations of the skin which had destroyed the cellular tissue and a portion of the sub-jacent muscles, I have obtained from its employment the finest cures, and that too in cases in which mercurial preparations had been rather injurious than useful.

I have also seen it cure syphilide accompanied with large pustules and ecthyma. It may be said, as a general rule, that in the syphilides, whatever may be their primitive forms, the iodide of potassium produces advantageous effects, whenever they become ulcerous. Mercury may doubtless cure also in such cases; but when it has been already employed by the patient, the iodide of potassium deserves the preference. Whatever may be the secondary or tertiary syphilitic symptoms in which this remedy is employed, it may be remarked that, in general, it succeeds with the greater certainty whenever the constitution of the patient is deteriorated—in contrary cases it is less efficacious, and even sometimes fails."

The last remark of M. Gauthier has its importance; for it was intended for certain anti-syphilitic modes of treatment, particularly that of Dzondi. Besides it corroborates the opinion of M. Ricord upon the kind of curative affinity which the iodide of potassium has for the tertiary symptoms, and for scrofula, which he regards as a tertiary syphilitic degeneration. The physician then knowing the admirable therapeutic resources which the healing art places at his disposal, will be no more discouraged by the cachectic state of his patients, than the surgeon will be deterred by the great debility of his subjects from the performance of amputations, when he recollects that very frequently wounded persons exhausted by suffering, by suppuration and by fever, present the best chances for successful operations.

The physicians who have employed the iodide of potassium, vary much in the doses in which they have administered it. For several years, only 4 or 5 grains were given in a day. Wallace employed a mixture, composed of $2\frac{1}{2}$ drachms of iodide of potassium and 2 ounces of water, of which he gave a tea-spoonful four times a day, which was equal to near 40 grains daily, and administered always the same dose during the entire treatment. This is a faulty method, for experience has shewn that doses increased during the course of the treatment are much preferable.

M. Ricord administers the iodide of potassium in much larger doses; he commences with 20 to 40 grains a day, and pushes it rapidly to 100 or 120, and has even given 160 or 180 grains. He administers the medicine in a ptisan of soapwort, or of hops, or in the syrup of sarsaparilla. In cases in which there is a combination of secondary and tertiary syphilitic symptoms, M. Ricord prescribes the protoiodide of mercury at the same time that he uses the iodide of potassium.

M. Gauthier commences the use of the iodide of potassium in a

small dose, such as 5 grains, or even less. He regards this practice as necessary to avoid the occurrence of accidents. As far as we are concerned, we have seen in general the medicine tolerated easily, in doses much larger than those employed by M. Gauthier. It is true, however, that in some patients more caution must be observed. The physician of Lyons increases rapidly the dose to several scruples, and finds it useful to give the medicine in a mucilaginous ptisan. The ptisan which he prefers is composed of 2 scruples of salep and 2 ounces of gum arabic boiled in 6 tumblers of water.

In ulcerations of the throat, M. Gauthier touches the ulcers with charpie, saturated in the following mixture:

R Iodide of Potassium, . . .	gr. 12.	} M.
Tincture of Iodine, . . .	℥ 2.	
Distilled Water, . . .	℥ 6.	

When it is necessary to administer mercury at the same time, he prefers M. Boutigny's syrup of the deuto-iodide of mercury.

The iodide of potassium ought to be continued for a certain time after the complete disappearance of every symptom. Besides, according to the remark of M. Ricord, there is no inconvenience in continuing a remedy which increases in the most energetic manner the activity of the digestive functions, and the appetite and embonpoint of those who make use of it. The work of M. Gauthier concludes with thirty-four cases in which the iodide of potassium cured, more or less rapidly, deep seated ulcerations, caries, syphilides, ulcerated tubercles, pains of the bones, &c. We think that some of these cases will be interesting.

CASE 1. Vast ulcer of the pharynx with destruction of the soft palate, in a woman who had never taken mercury. Administration of iodide of potassium.—Cure.

The widow G—, aged 60, came to consult me in the early part of April, 1844; she had a very large ulcer which had destroyed entirely the soft palate and the uvula, and which extended over all the posterior face of the pharynx. All these parts were the seat of a very abundant suppuration. This woman could utter a few words only with the greatest difficulty. For a long time she had been able to swallow only milk and soup for her nourishment. I informed her that she had a venereal disorder, and that she could be cured. She made the most positive denial: asserted that she had never had such an affection; that she had been a widow for several years; that she could not hope for a cure, and only desired some relief from her suf-

ferings. A physician, deceived doubtless by her denial, had simply cauterised the ulcerated parts with nitrate of silver, without employing any anti-syphilitic treatment. Having interrogated this woman, she informed me, however, that she had been troubled about 15 years before with white discharges from the genital apparatus, and that she had also experienced deep seated pains during the night in the head and limbs. She had been told that it was a rheumatic affection. I prescribed immediately the iodide of potassium in the dose of 4 grains per day. I exhibited it in the syrup of Cuisinier, diluted with a mucilaginous ptisan. I ordered at the same time an iodine gargarism, and recommended the patient to touch several times a day the ulcerated parts with charpie, saturated in the gargarism. The dose of the iodide was gradually increased; it sometimes distressed the stomach; in which case I added a little syrup of poppies. After the expiration of eight days the change was very appreciable, the suppuration was much diminished, and the deglutition more easy. In a month the ulcerated surface was entirely cicatrised. The patient took, however, only 1 scruple of the iodide a day, and it was sometimes necessary to suspend the use of it. The treatment was continued for two months. At the present time the patient enjoys very good health, has a good appetite, but there is much difficulty in eating, as the food and drinks enter into the nasal cavities; her voice also is much affected.

CASE 2. General perforating tubercular syphilide; pains of the bones; extreme emaciation: the iodide of potassium in very large doses effects a cure. Relapse after some months; pains of the bones and hyarthrosis: new cure by the iodide in much smaller doses than at first.

Claudine J——, aged 32 years, of a lymphatic temperament, was attacked, in April, 1842, with ulcers on the genital parts, which were cured by cauterisation and mercurial pills. Three months after this cure, there supervened a tubercular syphilide over the whole body, which was treated with sudorific ptisana, the liquor of Van Swieten, the syrup of Cuisinier, &c. The alimentary canal soon became irritable, cough supervened with hectic fever, the menstrual discharge ceased, and the syphilide, instead of improving became worse and worse. She was admitted into the hospital of Antiquaille, April 18th, 1842, in the most deplorable state: large ulcerated tubercles exist over the entire surface of the body, some of them upon the forehead, the cheek, and behind the ears, are as large as a quarter

dollar, some of them are covered with a thick scab, and from others exudes an abundant serous pus; they penetrate very deeply; the largest ulcerations occupy the left leg; this affection presents the aspect of the perforating tubercular syphilide of M. Cazenave. The patient is in a very cachectic state, the ulcers are very painful, and when in a bath they bleed: cough, epigastric pains, tongue red, cessation of the menstrual discharge for five months, hectic fever, extreme emaciation, complexion livid, nocturnal pains in the extremities, which cause an obstinate want of sleep.

After having subjected this patient for a month to mucilaginous drinks, to milk, and to opiate potions, I ordered the iodide of potassium in the dose of 2 grains per day, which I gradually increased to the dose of 1 scruple. Some amelioration then ensued. When the dose reached 3 scruples the condition of the patient remained stationary. I thought then that the proto-iodide of iron would be more suitable, because of the amenorrhœa and of the cachectic state of the subject. I was deceived in this opinion. During the administration of the iodide of iron, 1 scruple of which was given each day, the ulcers became more extensive and painful. The iodide of potassium was then resumed. As the condition of the ulcers had remained stationary while she was taking 3 scruples, the dose was now increased. When it reached 4 scruples per day, I perceived that the patient tolerated it well, and that her condition slightly improved. The dose was increased until 7 scruples per day were taken. I accomplished a cicatrisation of all the ulcers. The menstrual evacuation returned, after having been suspended for a year, and the patient left the hospital in a tolerably satisfactory condition.

Having been exposed to cold and dampness she was taken with very acute pains in the articulations, and was admitted into the Hotel Dieu, of Lyons, where she was treated with the extract of aconite. She left that Hospital much relieved, and was admitted into that of Antiquaille the 22d of August, 1844. She was then troubled with nocturnal pains in the bones of the head, there existed upon the arm one tubercle covered with a scab, and besides she was affected with hyarthrosis of the wrist and of the foot. I doubted at first the syphilitic nature of these symptoms—I employed vesicatories, fumigations, and vapour baths, but unsuccessfully. I had recourse again to the iodide of potassium. I commenced the 22d of September with a dose of 10 grains; on the 4th October she took 30 grains. The nocturnal pains of the head had already disappeared. On

the 8th October, 35 grains of the iodide were administered; the hydarthrosis of the wrist and that of the foot have greatly diminished. On 15th of October, 2 scruples of the iodide of potassium were taken; the hydarthroses have disappeared, and the patient has a good appetite. The treatment was continued to the 1st of December, and the patient left the hospital on the 10th of that month. The menstrual discharge at that time had not re-appeared. N.

Some of the Diseases of the Heart. By C. J. B. WILLIAMS, M. D., F. R. S., *Professor of Medicine in the University College, &c. London.*

Sounds of the Heart.—The sounds or murmurs accompanying the systolic action, as also the impulse, must be modified greatly by the force of the current out of the ventricles. There are several circumstances to be taken into consideration in reference to this subject; for instance, the blood may flow in the usual direction, into the aorta, the murmur being caused by some irregularity in the orifice; or the sound may depend on regurgitation through the aortic, the mitral, or the tricuspid valves. It may also be produced by perforations of the heart, and communications with the sac of the pericardium, or openings existing between the two ventricles, etc. Again, the murmurs which are heard during the diastole of the heart, are produced by a flowing back of the blood into the ventricle; and they are chiefly regurgitant aortic, regurgitant mitral, or else obstructive sounds.

Now, with regard to the distinction of the situation of sounds, we find them chiefly produced or propagated in those parts of the chest which form the best conducting media; as also in those parts corresponding to the direction in which the current flows. The obstructive aortic sound is heard best when the heart and the aorta are brought near to the surface of the chest, as is sometimes the case in consequence of enlargement of the heart. It may be heard most plainly about the middle of the sternum, or at its lower part, though sometimes more on one side, sometimes more on the other. There is no certain rule with regard to position. You find obstructive aortic disease sometimes occupying one position, and sometimes another. But it is not the mere position of the sound that distinguishes the disease. It is heard where it is produced; but it is also propagated in the direction of the great arteries, and extends along the aorta behind the sternum, up the course of the *innominata*, the left *sub-clavian*, and along the carotids. On the other hand, it may be heard pretty distinctly downwards towards the apex, but is by no means so loud nor so long as over the course of the arteries. Then, again,

the obstructive pulmonary sound is heard much in the same position ; it is a very small murmur, and may be produced by constriction of these arteries. The pulmonary artery and the aorta lie so close to each other, that there is some danger of confounding these sounds. There is this difference, however, between them. When you find the murmur very loud, and when it extends along the carotids, you may generally suspect it to be seated in the aorta. The obstructive aortic, and the regurgitant mitral, are the most common murmurs accompanying the sounds of the heart. The regurgitant mitral is produced in the mitral valve. It is heard, not so much immediately over the seat of the valve (about half way between the mammilla and the margin of the sternum) as it is at the apex of the heart, or a little below the left breast.

Functional Maladies.—I now pass on to the consideration of the diseases of the heart ; first noticing the functional diseases which imply disorder of the proper function of the heart's action. Disordered action of the heart may be divided into increased action, defective action, and irregular action. Inordinate action of the heart is engendered by various causes, and may be produced by different pathological states. For example : undue irritation of the heart, by an over-stimulating property of the blood, as when a person has taken stimulating liquors in considerable quantity. It may also arise from other causes than the state of the blood itself : from something extraneous to the heart—some mechanical cause interfering with the heart's action, as the stomach being overloaded—or from reflex irritation through the medium of the nerves, caused by various irritating matters in the stomach ; also it is produced by increased irritability of the muscular fibres of the heart itself, which may depend either on a greater flow of blood through the structure of the heart, or on a determination or inflammation of the lining membrane of this organ. Palpitation of the heart may be defined to be that amount of inordinate action which is perceptible to the patient himself, and is productive of more or less distress. The distress produced by the violent action of the heart is sometimes very great ; the patient is conscious of the beating, which is accompanied by a hurried and violent motion, as well as by a feeling of suffocation. There may, however, be inordinate action to a considerable amount, without the patient being aware of the existence of the disturbance ; many such persons being merely subject to short breath and a feeling of faintness. It is a remarkable fact, that with regard to functional diseases, generally speaking, the patient is conscious of the palpitation ; but in cases of structural disease, where there is inordinate action, the patient is not invariably conscious of the existence of palpitation. The reason of this is, that in cases of functional disease, the affection is intermittent, varying in its degree at different periods ; and it is during this increase in degree that the palpitation becomes distressing and uncomfortable. In these cases there is an exalted sensibility, a nervous excitability, existing in a high degree—an undue sensibility of the

nerves that renders the patient conscious of these inordinate motions of the heart. On the other hand, in structural disease, the inordinate action is developed gradually, until at last the patient becomes accustomed to it.

Physical Signs Accompanying Palpitation.—The physical signs of mere palpitation, without any structural disease, are an increase of the impulse, as well as of the natural sounds of the heart, exactly like that produced after violent exertion; violent exercise, in fact, produces palpitation, but it subsides with the cessation of the cause. With this augmented force of pulsation, the heart may be felt vigorously beating against the chest, and there is increased loudness of the first sound, in consequence of the greater vigor and abruptness with which the muscular tension is produced; but there is not augmented loudness in the second sound: there is not enough blood forced into the arteries, at each beat, to cause a sudden increased recoil upon the valves. In addition to the greater strength of impulse and abruptness, there is an absence of the signs of enlargement of the heart, which, although beating violently, is still in its proper place. The signs on percussion are not materially modified. If there be any trifling amount of disease at the root of the aorta, or in the aortic valves, so that there is a regurgitation of blood into the ventricle, these sounds become exaggerated during palpitation. In violent palpitation, the phenomena are strongly marked at the top of the sternum, in the carotids and arteries which are near, and in some cases of this kind the jugular veins may be seen to pulsate. Attacks of palpitation often terminate with eructation of wind, and when the palpitation subsides there is a free flow of urine. In some cases palpitation is excited by temporary plethora. Large quantities of fluid being drunk, become absorbed into the vascular system, and cause palpitation and a great flow of urine which is thus an index of the system having got rid of this excess. Sometimes perspiration takes place, and the thing subsides in this way. There are various causes for congestion which may produce palpitation; the heart is sometimes active, but does not contract fully on its contents, and then it is excited to violent palpitation. This occurs not unfrequently in connexion with asthenic plethora; and in this case there is increased dulness of sound at the region of the heart, and this organ is actually distended by the quantity of blood which it is unable to get rid of. This likewise, often co-exists with defective action of the excretory organs, a condition which thus induces great plethora of the vascular system. Palpitation is sometimes produced by other causes which bring about internal congestion: such as long exposure to cold; insufficient clothing; or even the opposite extreme, great heat. It is very commonly produced by extraneous causes; such as pressure over the region of the heart; flatulence; accumulation of faeces in the intestines; improper food; the formation of tumors near the heart or great arteries; and disordered uterine function. In all these different cases, the palpitation is only sympathetic; it may be only tem-

porary; but if it continue, it becomes very distressing, and tends in some instances to produce further disease, by throwing the blood irregularly into different parts of the system. Long continued palpitation, accompanied by plethora, may cause permanent disease of the heart or of the great arteries (either hypertrophy or dilatation). This is owing to the activity of the plastic process. In cases in which it is accompanied by congestion or inflammation, it tends, by its continuance, to the production of organic disease; on the other hand, as I have said, it is produced in the opposite state from merely nervous causes; by an anemic state, or a deficiency of blood in the whole system; and this may go on for a long time without producing any structural disease, merely accompanied by considerable functional disturbance.

Treatment of Palpitation of the Heart.—The treatment of inordinate action of the heart must depend on the cause. It may sometimes be relieved by stimuli, which seem to restore the natural action of the heart, and remove the nervous palpitation. Ether, aromatic waters, ammonia, and spirits, will give great relief in some cases of palpitation, restore the balance of the heart's action, and check the nervous irritability. These are only temporary measures. In cases in which it depends on congestion, the removal of the cause of this congestion must be considered as of essential importance. In all cases in which plethora exists, it is useful to employ local depletion to relieve the heart, and take away the increased load. Bleeding from the arm is, under some circumstances, serviceable; and it is desirable to produce increased action in the excretory organs, by purgatives, and various diuretics. It is, of course, necessary in cases of palpitation, accompanied by plethora or fulness, that the patient should be abetinent; and doses of calomel, for awhile, and Dover's powder, are of great efficacy; but they must be used in a moderate degree. The best means of acting on the urinary secretion is by colchicum, digitalis, and nitre. If the disease occur simply from nervous sensibility, without the plethoric state I have been mentioning, sedatives should be used in combination with other medicines; hydrocyanic acid, hyoscyamus, opium, and quinine, are the remedies. Sedatives, however, are but temporary measures, and for permanent good tonics are chiefly to be depended upon. The most useful is iron, where it can be borne; bismuth, nitrate of silver, and sulphate of copper, are also good remedies. In all cases, country air is essential, an abstinence from sedentary habits, regular exercise, and the use of cold water, either by drinking it, or sponging the whole surface, which tends to improve the capillary circulation; also a cold plunge bath; these are the means which are most efficacious.

Irregular and defective action may be classed together. Irregular action is defective in its actual result. Irregularity in the rhythm of the heart is very common in weak and nervous subjects, both young and old. It consists in an interruption of the beat, or a retardation, or else in too great an acceleration; so that instead of re-

curring at regular intervals, one sometimes occurs sooner than the other, then there is an interruption, and then it goes on again. A constrained posture will sometimes produce this condition, as also irregularities of diet, and so forth; this state, moreover, is usually combined with other symptoms of weak circulation, such as coldness of the extremities, or a congestive appearance of the face. Irregularity and inequality of the heart's pulsation are more commonly the effect of structural disease; but the palpitations I have been mentioning, as accompanying asthenic plethora, are often attended by irregular action, although there may be no organic disease.

Hypertrophy and Dilation.—It is desirable, first of all, to notice hypertrophy, dilation, and diseases of the muscular structure, because these require to be carefully distinguished in the treatment. Now, the muscular structure of the heart is scarcely liable to inflammation in itself, and *carditis* in the surrounding coats is extremely rare. The muscular structure of the heart is nevertheless liable to remarkable changes, and these appear to have relation more to the immediate derangement of its functions than to inflammation. There are many cases of structural disease in organs, in which direct inflammation is produced; but it is not so with regard to the heart. We find the origin of structural disease of the heart to be more particularly depending on disorder of its functions; and it may be stated, as a general fact, that circumstances which interfere with the function of the heart, which over-excite it or tax it in various ways, tend to produce diseases in its structure. Now, inordinate action and defective action may both lead to structural disease of the heart. On the other hand, we sometimes meet with cases in which the structural affections will go on for an almost unlimited period, without leading to great functional derangement. These are principally cases of *anæmia*, in which the quantity of blood is insufficient. Again there are cases in which an over-quantity of blood may have an influence in producing disease; where there is a plethora or fullness of the vessels. In some, this is accompanied by a peculiar activity in all the functions connected with the circulation, secretion, and nutrition; this is comprehended under the term *asthenic plethora*. In the other kind, there is an absence of power in the blood to nourish and increase the muscular substance of the heart, arising from some deficiency in the quality of the blood, or from some other cause; and this comes under the head of *asthenic plethora*. Now, in relation to these two cases, we may observe the development of two opposite conditions of the muscular structure of the heart. *Sthenic plethora*, inducing an excitement of the heart, will lead to hypertrophy of this organ, and an increase of the muscular structure. On the other hand, the increased or irregular action—which you will frequently find connected with *asthenic plethora*—a state in which there is a distention of the heart, without a corresponding increase in its nutrition, leads to a lesion called dilatation of the heart. These are the two modes in which these lesions are produced, and they

comprehend the various exciting causes. The matter, however, may be stated in another point of view; and this leads us to an explanation as to the modes in which various exciting causes act; as, when the heart is excited by continued obstruction—when there is some difficulty to the passage of the blood through the heart, either from weakness in the walls of the heart, or from positive obstruction in the vessels leading from it. Either of these causes excites the action of the heart, and leads either to dilatation or hypertrophy, according to the preponderance of the elements hitherto considered.

Now we come to hypertrophy. This is a somewhat rare disease. But, when the heart struggles long against an obstacle to the circulation, at the same time that the nutritive function is active, and the muscular strength is kept up, hypertrophy does take place. The exciting causes of hypertrophy are several: excessive muscular exertion, more particularly during the continuance of growth, when the nutritive function is active, and there is sthenic plethora in the system; that condition in which the blood is rich in nutritive matter, and ready to deposit its fibrine; when the heart is strong, and great excitement is given to it, it then grows in an inordinate degree. It is not, however, enough that the muscular exertion is occasional, it must be habitual. Again, in structural diseases, which are accompanied by so much obstruction as to impede the circulation, and excite the action of the heart in an inordinate degree, as the various obstructions that arise in the course of the large arteries, such as aneurism, &c., or any cause interfering with the current of the circulation, as emphysema of the lungs, and all those various circumstances which overtax the heart; in all these cases the muscular fibres of the heart are enlarged and hypertrophied. Obesity, too, when it is accompanied by sanguineous plethora, has a similar effect; and you find many cases of obesity attended with hypertrophy. This always manifests disorder of the circulation. Whenever a person is inclined to be corpulent, there is naturally more work for the heart, according to the necessary order of things; an increased task for the heart requires increased power and exertion. But in a state of cachexia, this increase in the substance of the heart does not take place; and we find symptoms of weakness of the heart, tending to palpitation, and other things under the head of defective action; and though the heart is not diminished in size, yet it has become too weak for the work it has to perform. These are the only two elements required for the production of hypertrophy which it is necessary to bear in mind: namely, sanguineous plethora, and excessive and continuous excitement of the heart. Any circumstances contributing to these two things, usually lead to a greater or less amount of hypertrophy.

The physical signs of hypertrophy are very distinctive. There is an increased developement of the muscular fibre, and this renders the contraction stronger, and consequently the impulse is more perceptible; but it is slow and more heaving. The fibres do not con-

tract with the same abruptness and suddenness, as in the normal state, and the sound is more or less modified. Where there is simply hypertrophy, unaccompanied by dilatation, the sound is usually diminished; whereas, in cases of dilated hypertrophy—where dilatation and hypertrophy are combined—there will be an increased loudness of sound, together with an increased strength of impulse. But the chief characteristic, distinctive of hypertrophy without dilatation, is an increase of impulse with a diminution of sound, just as in dilatation there is an increase of sound with a diminution of impulse. In some cases, the first sound is very indistinct at the region of the heart, and the impulse is strong and heaving; but near the large arteries, the first sound is heard more plainly. Where the increase of the substance of the heart is considerable, and the dilatation great, we then have a remarkable kind of motion produced during the diastole. In the normal state of the heart, the diastolic motion is scarcely perceptible; all that is felt is the apex of the heart coming in contact with the ribs, with the motion of the ventricle to the left of the sternum. But in these cases, during the diastole, we have a kind of heaving up of the walls of the chest, and that to a great degree; but there is a sudden collapse or pulling back of the walls at the moment of the contraction. This diastole Dr. Stokes called the back stroke, and it is frequently met with in cases of dilated hypertrophy. Now, besides this, the impulse is stronger and more extended; but the degree of this extent will vary according to the form of the hypertrophy. If it be simple hypertrophy, without any great enlargements of the cavities of the heart, the beat will be found but little lower than usual, and the impulse will seem to be directed downwards, without extending beyond its usual locality. But, in hypertrophy, with enlargement of the left ventricle, the impulse will vary according to the degree. The apex will be felt beating to a greater or less extent below the left breast. On the other hand, this dilated hypertrophy may sometimes assume the globular form, and then the impulse is felt mostly higher up, and has not that striking or lifting character usually accompanying it. This is a curious phenomenon of this species of hypertrophy. Ordinarily, the whole heart is lifted up, as it were, during the diastolic action, and at the time of the contraction, the apex is forced towards the walls of the chest. This is the reason why there is a sort of heaving swell felt in the region of the heart, when it is considerably hypertrophied. This is chiefly felt in the neighborhood of the sternum, and sometimes as low down as the epigastrium. Now, when the heart is very much enlarged, and the impulse is felt over a very great extent of surface, we shall find the sound on percussion considerably modified. The stethoscope is an invaluable instrument in these cases, and may be applied with great certainty to measure the dimensions of the heart in contact with the walls of the chest. And in cases of greatly enlarged heart, where there is not only hypertrophy, but dilatation of the walls of the heart, you will find that this viscus occupies a great

part of the front of the chest, from the upper margin of the second rib, extending to the epigastrium; also, around the left side, and the axilla, and passing two or three inches to the right of the sternum.—This is particularly the case in young subjects where the chest is narrow.

The effects of hypertrophy vary very much. You may find the enlargement of the heart accompanied by a more extended impulse than usual, but with little increased dulness of percussion, in some individuals scarcely amounting to disease; while in others it may occur to the extreme degree I have just been describing. Indeed, I believe that, in some cases, hypertrophy may be considered almost as a corrective of disease, and sometimes little inconvenience is felt from an enlarged heart. You find enlargement of the heart accompanying other diseases—diseases of the lungs and visceral affections, and in the greater number of instances of this kind, the progress of the disease is rather retarded than otherwise. There is a constitutional state in which there is a diminution of energy in some functions, at the same time that others are more active. Where enlargement of the heart accompanies emphysema of the lung, you do not have the dulness over the region of the heart, nor the impulse usually manifested, in consequence of the lung standing between the walls of the heart and the chest; but you have the signs of enlargement at the epigastrium, and you have also increased pulsation in the arteries. I have had cases of emphysema of the lung under my care, in which nature has overcome the obstacles in which the enlargement of the heart had originated.

Treatment of hypertrophy of the heart.—You must remember that hypertrophy, although it may exist to a great extent, is not always a disease against which remedies can be directed. In fact hypertrophy is to be considered as a condition which may terminate in disease. When, by the application of auscultation, we find the heart larger than usual, this indicates the necessity for precautionary treatment, but not for inferring the actual existence of disease. Accordingly, the treatment will vary very much. In extreme cases, where there is increased strength in the heart, and the circulation is very strong, there will be sometimes determination of blood to the head; and arising out of this there will be disorder of the secretory organs, and of the system generally, which may thus act secondarily on the heart itself, the violence of its action producing pain, and other sensations of discomfort. Now, we cannot expect to remove such a state as this altogether by bleeding. In severe cases, where there is an extraordinary amount of congestion and pressure in the system, there is no doubt of the expediency of blood-letting. In cases where there are symptoms of congestion of the brain from determination of blood to this organ, blood-letting may be resorted to in proportion to the strength of the patient. You must not, however, take too much blood at one time, but rather take a small quantity, and repeat the operation if necessary. Use evacuants, and such medicines as will

reduce the quantity of blood, without much impairing its quality. Also, sedatives of various kinds; such as digitalis, hydrocyanic acid, &c., to diminish the irritability of the heart's action, which is not to be knocked down at once, but to be reduced in a gradual manner. Where there is much pain and oppression, with a feeling of uneasiness at the chest, there is reason to suspect something of an inflammatory character, either accompanying the hypertrophy, or produced by the increased efforts of the enlarged heart. In this case, not only the depletory measures I have alluded to should be employed, but mercury should be administered, and cupping, blisters, and setons, may be used. The diet should be sparing, and irritating liquors should be avoided. The object is not to carry the antiphlogistic measures to the highest degree, but to produce a more moderate and equal action.

The physical signs of dilatation of the heart require care to be distinguished from those of hypertrophy. If the walls of the ventricles are thin, the contractions take place very abruptly and quickly. The result of this is, that the contraction ceases with the first impulse. There is a smart jerk with the first impulse, but it is a very short one, having nothing of the heaving character of hypertrophy. There are several points in which the impulse and the sound differ from the natural ones: the impulse is short and abrupt, possessing very little strength or duration. In the natural condition it is chiefly centered at the apex, and extends but a slight distance around; that of the right ventricle is inferior in strength to that of the left; but when there is considerable dilatation of the right ventricle, so as to make it extend to the anterior part of the chest, you then no longer have the beating effect, located between the cartilages of the fifth and sixth ribs. Under these circumstances, you have somewhat more of the impulse under the region of the sternum. It is very brief and slight in its force, and is accompanied by a short, abrupt sound. If the left ventricle is not dilated, the natural obtuse sound may still be heard below the left breast. But when the heart is not in direct contact with the chest, you cease to have the impulse, which is naturally communicated, because the dilated right ventricle pushes aside the left ventricle. Under these circumstances you do not have symptoms of weakness in the circulation. There is considerable strength in the impulse of the arteries in the neck, and at the top of the sternum, though there may not be the natural amount of impulse at the region of the apex. When the left ventricle is dilated, there is a change in the condition of the heart, and its shape is altered. The heart is altogether more globular, and there is a diminution in the natural impulse. It is far less distinct, and is diffused over a larger surface: where dilatation is conjoined with hypertrophy, the impulse often extends over ten or twelve square inches, over the whole of the front of the chest and the left side. The sound is otherwise different in its character. It is a short first sound, extremely like the character of the second sound; so that the two sounds following each other are

not to be distinguished in character, but only by their succession. On placing the hand on the region of the heart, there is found to be an increase of the impulse as far as extent is concerned; but it does not lift up the ribs at all. If it does that, we may be pretty sure that there is hypertrophy, combined most probably with extreme dilatation of the auricles. We have, however, no certain means of determining this at present, and we are not acquainted with any peculiar pathological conditions which it tends to produce. Laennec thought that dilatation of the auricles produced modifications in the second sound; but he seems to have had a mistaken notion as to the sound produced by the contraction of the auricles. I have very distinctly seen the pulsation of the auricles alternate with that of the ventricles. Sometimes a double pulsation is seen in the veins; this is especially observable in the jugular veins, and the superficial veins of the thorax.

The treatment of dilatation is very much the same as that under the head of defective action. It proceeds essentially from weakness; a want of tone and of strength, or, perhaps, of both; and accordingly the treatment most generally applicable to the dilated heart is strengthening by means of tonics. But there are different circumstances to be taken into account in the application of this form of treatment. Sometimes the blood is more than the heart can propel, and we have here to enable the heart to propel this load: it is some time before we can give sufficient strength, but we may give temporary relief. When the dilated heart is palpitating much, and obviously struggling with a load of blood which we cannot propel, we should apply blood-letting and cupping, or leeches over the region of the heart. Sometimes, in asthenic plethora, where there is much lividity, or a bloated appearance of the countenance, there is more blood in the system than the heart can propel, and it is useful to withdraw blood to relieve the heart. This is only a temporary expedient. There is another circumstance that indicates the necessity of a modification of a general tonic treatment: you must remember that there is a weak circulation throughout the whole system, and at the same time a weakened state of the secretions; and, therefore, it is important, while we are using tonics and stimulants, also to employ measures to increase the action of the secretory organs. This is an indication that should always be attended to. Evacuants, aperients, diuretics, and dietetics, may be used at the same time that you are giving tonics and stimulants freely. The treatment should be as strengthening and as nourishing as the patient can bear. Mineral tonics, especially iron, are highly calculated to restore the strength of the heart, and to diminish the irritability of the system. It is desirable to vary the use of these from time to time, at the same time giving mineral acids. It is difficult to say how these tonics act on the animal frame and the contractile powers, but it is certain that some tonics have the effect of tightening up the muscular fibres: alum also might be useful in these cases. I have seen this remedy so far useful as to diminish the congestion of the liver. Tonics, however, are slow of action, and in

cases of weakness stimulants may be given, especially where any exertion is required—ammonia and so forth may be used. It is very desirable to keep down the mass of the blood, and to prevent it becoming too bulky, at the same time that we improve its quality, and make it as rich as possible. In doing this, we must attend to the state of the secretions, keeping them quite free, more particularly those of the kidneys and skin. Warmth of the extremities, and so forth, is useful to relieve the accumulation of blood towards the heart, and to promote circulation towards the surface; keeping the diet of as nourishing a character as possible. See that the digestive organs are well managed, and avoid excess of liquids, as these are often extremely injurious, and not only by interfering with the digestion, but likewise by encumbering the organs of secretion. When a great quantity of water is taken into the system, it must be absorbed and carried away into the vessels. If the heart is weak, too great a quantity of liquid will encumber it still more. There are many reasons for adopting a diet of a dry nature, though not absolutely so. The diet should be as nourishing as it can be borne, and there should be abundance of animal food taken two or three times a day, if the digestive organs will bear it. A little gentle exercise is highly desirable, as much as can be taken without fatigue, varying the exercise with rest in a recumbent position. Where the patient is too weak to bear exercise, friction may be substituted, so as to promote the circulation, and thus aid the action of the heart. Great advantage is derived from cold bathing, which tends to improve the cutaneous circulation, and ultimately increases the vigor of the system.

(To be concluded in next number.)

PART III.—MONTHLY PERISCOPE.

The Spleen and its Functions.—The observations on the functions of the spleen have elicited the following facts. 1. The greater part of the water, received into the body, is admixed with the venous blood of the spleen in a few minutes, by which means a great distension of this organ is effected. 2. The splenic veins leading to the vena portæ, are filled during the digestive process with a darker blood than the other veins of the body. 3. The spleen has been extirpated in some animals (chiefly herbivorous), without any peculiar injury to the system, with the exception of a slight derangement in the process of chylicification. 4. The spleen, possessing no eductory

canal, can have no influence on the formation of chyle. 5. The periodical accumulation of blood in the spleen, particularly during digestion, makes it appear to be a mere reservoir of blood for the organism, favoring perhaps chylification by its pressure on the stomach. 6. The lymph, passing from the spleen, is redder and more coagulable than that of other organs. After the extirpation of the spleen, the lymph, as it passed into the thoracic duct, was white, thin, slightly coagulable, and, only after it had been exposed some time to the air, did it assume those properties of redness and greater coagulability, usually communicated through the influence of the spleen. 7. After the extirpation of the spleen, a more abundant urinary secretion takes place, the urine being thin and watery. 8. The bile has, in this case, a much darker color and an altered taste. 9. The volume of the spleen is enlarged, and the texture relaxed, by intermittent fever, as well as by typhus abdominalis. In explanation of the above facts, it is shown that the larger viscera of the body, and particularly of the abdominal cavity, have a specific attraction or relation to the elements of which the organism is chiefly composed, and by which it is reproduced: i. e. oxygen, hydrogen, carbon and azote: the lungs to oxygen, the kidneys to azote, the liver to carbon. Now, hydrogen alone remains, which is not always found combined with oxygen, in the form of water, in the organism, but also (pathologically) with other gases in the blood. The spleen seems to form the point of attraction for this hydrogen, a view confirmed by the fact, that in all countries in which an excess of hydrogen is found in the air, and thus received in the blood, affections of the spleen are chiefly produced. Thus, we may say, that the spleen has a specific relation to hydrogen, separating it from its combinations, in order to elaborate it for its peculiar organic purposes. Thus, water undergoes a decomposition in the spleen; the *hydrogen* is carried with the blood of the splenic veins to the liver, and used for the secretion of bile. This accounts for the dark color of the venous blood of the spleen, during digestion; therefore, the bile becomes changed in character, and the urine watery, after extirpation of the *spleen*. The oxygen of the water is absorbed by the lymph, and produces the color and coagulability proper to this fluid. In intermittent fever, the spleen becomes enlarged and softened, in consequence of the hydrogen collected in it. In perverted, or obstructed, function of the spleen, the water is left in the blood circulating through the body, and produces abnormal and morbid phenomena in consequence. The, so called, *splenic vertigo*, appearing under the form of a derangement of the functions of the brain, seems to be produced by this abnormal reception of hydrogen into the blood.—*Dr. Frank of Berlin in Casper's Wochenschrift.*
[N. Y. Journal.]

Observations on the Mysteries of Generation. By M. MOREAU, (Bulletin Gen. de Therapeut. Med. Chirurg. 1844.) It is not our object to write a dissertation upon the various systems by which the

mysteries of generation have been attempted to be explained; we wish simply to state an opinion of the pre-eminence of one over another, which we have heard advanced by our learned professor of midwifery, M. Moreau. This view of the act of generation presents to the physician an important practical question, which should attract his attention. It may not be peculiar to Professor Moreau, but these observations assume much more weight in our estimation as emanating under the patronage of a name so respectable as his, and more particularly as they are strengthened by a great number of observations taken from his practice.

Every one knows that all the systems proposed and discussed, from the earliest period to the present day, may be reduced to two—the *ovariasts* and the *epigenesists*. The former maintain that the new being exists *en germe* in the female ovary, and man only contributes in the act of generation by vivifying the germ. With the latter, the individual is formed entirely by the materials furnished by both sexes, each taking a more or less active part in the product of conception. M. Moreau believes in the doctrine of *epigenesis*. He thinks it incontestable that the individual who is the strongest, who enjoys the best health at the moment of conception, will have a pre-eminence over the other, and that the sex of the child will be determined by this pre-eminence. It has been ascertained by M. Moreau, a number of times, and every one can appreciate the truth of the remark, that in families where the man is vigorous and robust, and the woman is feeble and delicate, the males predominate; and where, on the contrary, the woman is very young and robust, and the man is sickly or old, the females outnumber the males. In some families we find all boys; in others, all daughters. In such cases, the predominance of one sex or other is constant—it is, in some measure, constitutional. But the predominance of the man over the woman, or of the woman over the man, arises from the state of the physiological forces—from the vital powers of each, at the moment of reproduction. If, then, the husband, although the most vigorous, is enfeebled, is suffering from any depressing cause, the wife, although apparently more feeble than he, will have the pre-eminence, and *vice versa*. In a word, it is not always from the exterior—from appearances, that we ought to judge of the physiological state of the reproductive forces. The state of the organism at the moment of copulation, exercises an immense influence, and the sex of the child will be determined by the relative state of the parties concerned, at the time of coition.

From these considerations it follows that we may, at pleasure, in some degree determine the production of one or the other sex. This fact, which sometimes possesses a high degree of social importance, is indisputable, according to M. Moreau. He is convinced that he has, in a number of cases, influenced by the above considerations, determined the production of a boy or girl. M. Moreau reduces to practice the well established rules of hygiene; which consists in tonifying the one and reducing the other; this is all. A captain of

huzzars, of some renown, about 34 years old, having led a dissipated life up to the period of his marriage, espoused a young girl of 22 years, strong and in fine health. His first and second children were daughters. He was anxious for a son. M. Moreau, being a witness to his despair, promised him a son if he would consent to change his habits. He renounced a mistress whom he kept; he took tonics and a substantial diet, and drank Bordenaux wine to recruit his strength, *enim in vino Venus*; he observed the most absolute continence; and during this time, his young wife was subjected to the use of prolonged tepid baths, and to a light vegetable regimen. He seized for the conjugal embrace the moment when his wife was languid, and *mal à l'aise*; a third pregnancy followed, and behold a son was born unto him!—*N. O. Med. Jour.*

Diseases of the Negro Population. By DANIEL DRAKE, M. D.,
in a letter to Rev. Mr. Pinney.

MEDICAL INSTITUTE OF LOUISVILLE, NOV. 15, 1844.

Dear Sir: Since our interview in Cincinnati, I have been so much engaged in entering on my duties for the winter, as to be unable till now to comply with your request, for some notice of the diseases of the colored population of the South and West. As I told you then, my inquiries were chiefly made in Alabama, Mississippi and Louisiana, in the spring and summer of 1843 and '44. Of the diseases of which I am about to mention, I witnessed most of the varieties, but the greater and better part of my information was derived from conversation with physicians, planters, and overseers, carefully noted down at the time. By referring to these, I give you the following statement:

1. Many infants die of trismus, or lock-jaw, when they are but a few days old; after that early age, convulsions, and summer sickness, (cholera infantum,) and worms, carry off quite a number.
2. They are liable to measles and scarlet fever, both of which were prevailing (but especially the former) on many plantations which I visited; which diseases seem to be as fatal to them as to the whites.
3. Scrofula or king's-evil is of frequent occurrence; and consumption, or cachexia Africana, as it has been called, is prevalent and always fatal.
4. On many plantations the strange habit prevails of eating dirt or clay, the common soil of the fields, particularly that of the Mississippi bottoms, producing serious and fatal diseases. I was told of one estate in South Alabama, on which fourteen slaves had died from this cause, and visited another in Louisiana, on which I saw nearly half that number unable to work from the same practice.
5. A disease of the heart, conjectured to arise from dirt-eating, destroys quite a number. I met with several cases, and heard of a plantation on Red River, where more than thirty died from this malady.

6. Tetanus or lock-jaw from wounds, is extremely common and almost uniformly fatal. Some cases occur without previous wound. A physician in Alabama told me he had, in fifteen years, met with at least fifty cases, nearly all colored people, and all but one mortal. I met with several young physicians in the smaller towns, who had, respectively, met with more cases than have occurred in Cincinnati from its first settlement.

7. Diarrhœa and dysentery, of frequent occurrence, are often fatal.

8. Where the cholera was epidemic, in 1832, '33 and '34, it swept off great numbers; was more destructive, in fact, to the colored than the white people of the Southwest.

9. Epidemic erysipelas, or black tongue, has prevailed on many plantations within the past year. I was told of one, in Mississippi, on which seven had died of it.

10. The colored people are not proof against the cause of yellow fever, but as they are not numerous in the cities and towns, where only it prevails, the mortality from this disease is not great.

11. Acute inflammation of the lungs is among the most destructive diseases of the colored population. These are catarrh, croup, bronchitis, pleurisy, and pneumonia, or inflammation of the substance of the lungs, which is the most frequent and fatal of the whole. These maladies often destroy life in a few days; but sometimes the patient recovers with his lungs rendered permanently unsound. I saw many cases of this kind. This group of diseases, produced by changes of weather in winter and spring, occasions more deaths than any other, except the next.

12. Intermittent, and remittent fevers; simple, and malignant or congestive, are the greatest outlets of human life among the people of whom I am speaking. They return every year in the latter part of summer and in autumn, and one attack is no security against another. When they do not prove fatal, they leave behind them diseases of the spleen, and dropsy. In the following winter those who were down in the autumn, are tender, and often die of inflammation of the lungs.

In addition to the diseases I have named, others occur now and then, with considerable frequency, of which I may mention rheumatism, epilepsy, colic, hysteria, and several infirmities peculiar to women.

From this catalogue you will perceive that the colored population of the Southwest are by no means exempt from a variety of formidable diseases. As we come further north, tetanus and autumnal fever get less, but consumption and inflammations of the lungs increase. All over the region of which I have spoken, the greatest part of the practice of every country physician is among the colored people. A gentleman in Louisiana told me that he received a salary of \$1,200 a year for attending on a single plantation. From all I have read and heard of the diseases of Liberia, my impression is, that if half the colored population of a Southwestern plantation were sent to the

colony, they and their descendants, in ten years, would number more than those left behind.—*New Orleans Medical Journal*.

Treatment of Hemicrania and Tic Douloureux by Cauterizing the Palate.—By M. DUCROS, of Marseilles.—In the most intense hemicrania, and in the most obstinate *tic douloureux*, whether fronto-facial or temporo-facial, the pain disappears instantaneously on the application of ammonia at 25°,* to the palatine arch, by means of a [camel's hair] brush; the brush being allowed to remain on the part till a copious flow of tears has been excited. I have tried this for the last three months in a very great number of cases, and the pain has always ceased. If the pain returns, a fresh application again produces a cessation of the neuralgia.—*Gazette Medicale*.

Discharges from the Ears.—Mr. Wilde, of Dublin, has written [*Dublin Journal of Medical Science*, January, 1844,] a most excellent treatise on the causes and treatment of otorrhœa, chiefly dwelling on the affections of the external tube and external surface of the membrana tympani. There are few diseases which are more frequently neglected and carelessly treated, than those of the external ear; and few which, when allowed to proceed, entail more inconvenience on a patient during the remainder of his life. In simple otorrhœa, Mr. Wilde paints over the surface with a solution of nitrate of silver, ten grains to the ounce, applied with a fine camel's hair pencil, either to the whole or a portion of the surface, according to the extent of the disease. This is repeated every third day, and in the interval the ear is syringed night and morning, and oftener if the discharge is copious, with plain tepid water, by means of a gum-elastic bag, which, when used by friends, is much preferable to the usual piston syringe, and at night a slightly astringent lotion is dropped into the ear till it fills up the meatus, and allowed to remain there for a few minutes. For this purpose we may use liq. plumbi diacet. one drachm, to an ounce of water or rose water; or weak solutions of alum, copper, or chloride of lime. But otorrhœa is often exceedingly difficult to cure, owing to its being caused by morbid vascular growths, such as granulations on the membrana tympani, which are allowed to proceed undiscovered. In such a case the part appears quite red and vascular, and Mr. Wilde recommends the application of the solid nitrate of silver, rubbed over the part about every second day, or oftener if necessary; and for this purpose he uses a very neat little instrument which is five and a half inches long, consisting of a silver tube, cut spirally for three-fifths of its length, and having an aperture on the side near the extremity. In using this *port-caustic*, a little nitrate of silver is melted over the lamp on a small platina ladle, and

* A solution of ammonia, showing 23° on Baume's hydrometer, = a specific gravity of .936. The liquor ammoniæ fort. of the London College is of the sp. gr. 842.—*Translator's note in Med. Gaz.*

then, when about cooling, the end of the *port-caustic*, is dipped into it till the aperture and extremity are filled and coated over with the caustic. We often find, however, that discharges from the ear are kept up by polypi, which it becomes necessary to remove; and for this purpose Mr. Wilde recommends a little instrument, first recommended, we believe, by Mr. W. Robertson, surgeon to the Kelso Dispensary. It is a small snare-like apparatus, consisting of a fine steel stem, with a movable bar sliding towards the handle. It is so constructed that a noose made of fine silver or platina wire may be pushed down to the polypus, so as to surround and ensnare it. The morbid growth may thus be safely and cautiously taken away, either in part or wholly, and by the regular application of the armed *port-caustic* from day to day, all trace of the growth may ultimately be extinguished.

A Case in which a sharp pointed body was swallowed by a child, passing the bowels without injury. By Dr. B. W. AVENT, of Murfreesboro', Tenn.—On Thursday evening, 8th July, I was requested to visit a little girl, 4 years old, who, whilst engaged at play, had accidentally swallowed a sharp-pointed instrument, about two and a half inches long. This instrument was originally the handle of a long-bladed knife, the jaws of which had been filed off about its centre, leaving the back spring, which had been ground very sharp at its point.

I saw the patient an hour after the accident occurred, and, as might have been expected under such circumstances, found the family in great alarm, and in the act of preparing an emetic, with a view to cause the stomach to eject this foreign body.

The little girl was suffering no pain at all, and on examination I was satisfied that the instrument had passed the cardiac orifice without producing any injury in its passage. Aware that the point of this instrument was sufficiently sharp to penetrate the stomach, should it come in contact with it during any contractile action of that organ, I at once explained to the parents the great danger of any medical interference, and advised that the unassisted efforts of nature should be relied upon for relief, at least until some unpleasant symptoms should arise. With this advice, I left the patient about as comfortable as if nothing unusual had happened.

On the following morning she complained of some pain in the epigastrium, but it was not of sufficient violence to excite much alarm. She took her breakfast as usual, and was permitted to engage in her accustomed amusements. After the morning, the pain in the stomach subsided. Sometime during the day her bowels were evacuated, without presenting any unusual appearance in the *stercus*. On the next (Saturday) morning, she was still well, had no fever or visceral excitement whatever, and had complained of no pain since the morning of the previous day. Through this day she continued to be playful, and suffered no inconvenience. The bowels were once moved without medicines.

Sunday morning.—Patient still free from all excitement. At 9 o'clock this morning, just 64 hours after the occurrence of the accident, the instrument was discharged from the bowels, enveloped in fæces, without any pain or inconvenience whatever. But little, if any visible impression had been produced upon it during its passage through the bowels.

In the management of this case I applied no medical treatment, though often solicited to do so. I advised that the little patient should be permitted to engage in her customary amusements, and to take her ordinary diet, hoping by this course to keep her system, as nearly as possible, in a normal condition, the natural action of the alimentary canal undisturbed, and that thus, as happened, the "unwelcome visitor" might be expelled.

Medical interference, in this case, would have consisted either in vomiting, with a view to the ejection of the contents of the stomach, or in the use of purgatives, more speedily to evacuate the contents of the bowels. In either plan of treatment there would have been great danger to the patient. The contraction of the stomach, necessary in vomiting, would undoubtedly have endangered the wounding its coats, by coming in contact with the sharp point of the instrument, at every effort of that character, to say nothing of the great improbability of effecting the object desired; whilst, on the other hand, cathartics would not only have produced irritation of the bowels, but by carrying off too hastily their fæcal contents, might have left the foreign body behind, in a condition to wound them at every peristaltic motion.

Two circumstances existed in this case which favored the safety of the patient. First, the instrument was swallowed with the handle or blunt end downwards, which prevented its wounding the parts in its passage; and, secondly, its length prevented its taking a transverse position; either of which circumstances might have greatly endangered, if not destroyed, the life of the patient.—*Western Med. Journ.*

Treatment of Strictures of the Urethra. By Dr. J. Béniqué.—The author prefers dilatation to every other mode, but employs it in a manner more convenient to patients. He introduces into the urethra a bougie whose volume varies according to circumstances. As soon as it has penetrated, it is withdrawn and a more voluminous one introduced. Thus in succession three or four bougies, each larger than the other, are employed in the space of two or three minutes. The next day, he introduces the bougie which had been last used on the preceding day, and several others, increasing in size in the space of some minutes: thus he continues every day until he succeeds in the introduction of the largest bougies, which are not permitted to remain in the urethra for a longer period. Experience has demonstrated to M. Béniqué that this mode of producing a gradual dilatation succeeds

as well as that of leaving bougies in the urethra for several hours or the entire day; it has the advantage of not disturbing the urinary passage, and of not keeping the patient from his ordinary occupation. (*Trans. from Archives Générales de Méd., March, 1845*) N.

Surgical Cases.—CASE I. Fracture of the Femur, Fibula and Radius.—A young man, æt. 23 years, was thrown from the top of an omnibus, which caused a fracture of the femur and fibula of the right side, and of the radius of the left. He was brought in the Hospital and kept perfectly quiet until the second day after the accident, when Dr. Mercier applied the starch bandage to the whole injured leg.—Simple dressing with splints and ordinary bandage were applied to the arm. The patient is free from irritation, lying quiet and doing well.

CASE II. Simple Fracture of the Femur; of about four weeks standing; still ununited.—The subject of this case is a vigorous young man, aged 20, apparently of fine constitution; entered the Hospital 11th March last. Dr. Mercier found him in the ward when he took charge of it. He at once applied the starch bandage from the toes to the hip. Seven days afterwards, the young man left his bed and walked out into the yard with the aid of his crutches. He appears to be recovering rapidly.

CASE III. Fracture of the Humerus, of six weeks' standing; ununited.—Dr. M. found this case also in the Hospital when he commenced duty. He applied the starch bandage immediately. It is now nearly three weeks since, and the patient is perfectly comfortable—the cure nearly completed.

Dr. Mercier's Treatment of Ulcers.—An immense number of chronic ulcers are admitted into the Hospital, and quite a variety may generally be seen in the surgical wards. The subjects, for the most part, belong to the poor class of Irish laborers, whose habits are bad, who are very much exposed to the inclemencies of the weather, and who are proverbial for their disregard of all the dictates of prudence. Their constitutions are generally very much injured by intemperance, and it is almost impossible to establish the healing process when any injury is inflicted upon their shins, for this is the most common seat of ulceration. Dr. Mercier has found the following plan of treatment to succeed better than any other:—He gives iodid. potass. 3ss., and iodine gr. i, dissolved in decoc. sars., ʒvi daily. When suppuration is copious, he has the sore washed clean with chloride of soda, and dresses it with lint wet with vin. aromat.—when the discharge is moderated and granulations spring up, he covers the sore with narrow strips of adhesive plaster; with the triple view to counter-irritation, compression, and exclusion of the air.—*N. O. Med. Journal.*

Singular cause of Error in Diagnosis of Affections of the Knee.—In the last *Concours* for the chair of Clinical Surgery in the Faculty

of Paris, a singular case occurred, the diagnosis of which gave rise to a difference of opinion both amongst the competitors and judges, and in which, moreover, had an error been committed, the result might have been a serious operation. M. A. Bérard, the actual nominee to the chair, thought that he recognized the existence of a foreign body in the knee-joint of a patient affected with hydarthrosis, and which had fallen to his lot as the subject of lecture. On examination he found, besides an effusion of serum, a distinct circumscribed tumour, of the size of an apricot stone; it rolled under the finger, and was situated at the external side of the knee, above the patella. M. Marjolin, *juge de concours*, did not coincide with this opinion, and affirmed that what was considered as a foreign body was nothing more than an adherent tumour, very often found in those affected with hydarthrosis: he was ignorant of its nature, never having had an opportunity of dissecting one. M. Malgaigne, one of the competitors, and who, like M. Bérard, believed in the existence of a foreign body within the joint, hastened to examine this tumour on two patients affected with hydarthrosis, then under his care in the Bicêtre, and he found it exactly the same as in the patient of M. Bérard. One of these patients died shortly after; he thus had an opportunity of determining its nature, and found that the apparently foreign body was nothing more than a pellet of fat, of a perfectly healthy appearance. M. M. next inquired whether this tumour was entirely the result of inflammation, or whether, previously existing in the natural state, it only acquired an increase of development in consequence of disease? To determine this point he opened a number of healthy knee-joints; in almost all of which he found the above-mentioned tumour, generally on the external side of the articulation, but sometimes on the internal. Its normal existence is no way connected with hydarthrosis; but it appears to increase in size under the influence of the pain and articular inflammation: it is not found in all subjects affected with hydarthrosis; but when it does exist during the course of the disease, it continues after the disappearance of the latter; pain or pressure continues longer over the site it occupies than anywhere else, as if the irritation disappeared more readily when the synovial membrane alone is affected than when it spreads to the adjoining adipose tissue.—*Lond. and Edin. Month. Journ. Med. Sci.*, Oct., 1844, from *Encyclographie Méd.*, June, 1844. *Am. Jour. Med. Sciences.*

On the Medicinal properties of the Bebeerine—In the April No. of the *Edinburg Medical and Surgical Journal*, Dr. MacLagan reports a number of cases of intermittent and remittent fever treated with the Sulphate of Bebeerine, the active principle of the *Nectandra Rodiei*, a tree found in British Guiana, and so called in honor of Dr. Rodie, the original discoverer of its medicinal powers. "The cases of fever treated with bebeerine," says Dr. M., "with which I am

acquainted, amount to about 40. In all of them it appears to have manifested more or less of anti-periodic action. In 6 cases, or nearly one in 7, it does not seem to have acted satisfactorily. Of 26 cases, the details of which are given, 5 only, suffered from any unpleasant effect, and this seems not to have gone beyond a little *tinnitus aurium*." The bobeerine has also been used with benefit in neuralgias. Dr. M. states that the bobeerine differs from the quinine in not being so liable to excite the circulation, or affect the nervous system. He gives it in the form of pill, made with conserve of roses, in the same way and doses of quinine. It can also be given in the liquid form, the addition of a few drops of diluted sulphuric acid sufficing to form with it a perfect solution.

Inhalation of Oxygen Gas an antidote to poisoning with carbonic acid.—An individual, in the course of some pharmaceutical experiments, inhaled a large quantity of carbonic acid. Removed into another chamber, he lay motionless, the eyes closed and the face a pale yellow, the cheeks, together with the lips, tongue and hands, were livid; the pupils were fixed and somewhat dilated; all the senses had entirely disappeared; the carotids beat violently; the action of the heart was frequent but weak, the pulse scarcely perceptible, and the breathing weak and irregular. The cold douche, bleeding and other means were unsuccessfully had recourse to. A quantity of oxygen gas was then prepared, and this he was made to inhale, to the extent of two quarts and a half. In about fifteen minutes he rallied, as if from a deep sleep, and recovery was progressive. The use of the oxygen gas is in this case sufficiently evident. We have seen the chlorate of potass, which contains a large amount of oxygen, administered under similar circumstances, with a most beneficial result. This case is recorded at length in the *Northern Journal of Medicine*.

On Detaching the Placenta in cases of Placenta Prævia. By — RADFORD, M. D.—Since my observation on galvanism in uterine hæmorrhage, published in the Provincial Medical and Surgical Journal, I have had letters from many gentlemen, inquiring whether I confined the practice to detaching the placenta in cases of placenta prævia to those of exhaustion alone. In order, then, to supersede the necessity of writing to each correspondent, I make the reply through the same channel. In my paper I stated that I had detached the placenta in a case which occurred in 1819, but did not then state that it was unattended by exhaustion. From this and other cases then alluded to, I conclude that on a complete separation of the placenta, the hæmorrhage is immediately and completely suppressed, provided the uterus is in a condition to so far contract, as to force down the head with the placenta upon the uterine openings. By this practice it may be said

that the life of the child is sacrificed : but this will not always happen. We find from hospital and individual reports, that the child is usually dead when the case has been treated by the present recognized means.

In nearly all cases which I have collected and referred to in my paper, of expulsion of the placenta by the natural efforts, we find that the mother recovered ; and when this fortunate event did not happen, it depended upon the serious impression made upon the vital powers before the placenta was completely detached.

It may also be stated that uterine phlebitis takes place more frequently in cases of placenta prævia, when the ordinary practice is adopted, than we observe in the same number of cases of accidental hæmorrhage. This result, in the opinion of the writer, arises from the contusion and slight lacerations which are consequent upon a forced delivery.

From the above statement, I consider I am justified in recommending a modified practice ; but I shall not enter fully into the details of the plan, as this brief communication will not allow of it.

First. Then, as neither delivery, nor detaching the placenta, ought ever to be attempted until the cervix and os uteri will safely allow the introduction of the hand, rest, the application of cold, but, above all, the use of the plug, must never be omitted in cases where they are respectively required.

Secondly. If there are unequivocal signs of the child's death, the placenta is to be completely detached, and the membranes are to be ruptured. The case is then to be left to the natural efforts, provided there be sufficient uterine energy ; if otherwise, the ordinary means are to be used, and, in addition, galvanism.

Thirdly. When the narrow pelvis exists in connection with placenta prævia, the practice is to detach the placenta and to remove it, then to perforate the head as soon as the condition of the parts allows, and to extract it by means of the crotchet.

Fourthly. When the os uteri is partially dilated, and dilatable so as to allow the easy introduction of the hand, when the membranes are ruptured, and strong uterine contraction exists, the practice is to detach the placenta completely.

Fifthly. In all cases of exhaustion, as already referred to in my paper, the practice is to draw off the liquor amnii, by perforating the placenta, as then recommended, then to detach completely this organ, and apply galvanism.

Sixthly. In all cases of partial presentation of the placenta, the artificial rupture of the membranes will generally be found sufficient to arrest the hæmorrhage, but if that should prove ineffectual, then we must apply galvanism.

The practice of detaching and removing the placenta was adopted by some of the older writers ; and as I have mentioned in my paper "On galvanism applied to the treatment of uterine hæmorrhage," I detached this organ in the year 1819, although it was not my custom to do so.

Early in October, I received a letter from my respected friend, Professor Simpson, in which he stated he removed the placenta in a case of unavoidable hæmorrhage. He "had the placenta on a plate two hours before the baby was born." The mother recovered. Dr. Simpson has collected a great number of cases of expulsion of the placenta before the child, and has come to the conclusion, that the practice of its removal, in some cases of placenta prævia, is calculated to save the parent's life.

I am glad to have my views on this most important subject corroborated by an authority so deservedly esteemed as Dr. Simpson, to whom I am disposed to award every degree of merit which really belongs to him, as having by observation and research accumulated materials to bring him to the same conclusion at which I arrived myself. Although I feel thus gratified in having the authority of Dr. Simpson in support of this practice, I must confess that it is to be the late Mr. Kinder Wood, who for many years was an active and deservedly respected colleague of mine at the Lying-in Hospital, that the merit (if there be any) is due for the first, as a modern obstetrician adopting this practice, and also recommending it in his lectures. The practice I allude to, is that of detaching and removing the placenta in cases of unavoidable hæmorrhage, attended with exhaustion. In the foregoing observations I have ventured to recommend this practice as applicable to cases in which there exist different conditions, convinced that there are many mothers sacrificed by the rash manœuvres consequent on a forced and indiscriminate delivery.—*Provincial Medical and Surgical Journal*.

Successful Case of Expulsion of the Fœtus through a rupture of the Uterus and Abdominal Parietes. By Dr. PEARL of Hildesheim. (*Allegemeines Repertorium*, June, 1844.)—A woman, 28 years of age, deformed by rickets, and the largest diameter of whose pelvis did not exceed two and a half inches, was delivered by the Cæsarean section on the 11th of January, 1842. The child was a female, and alive, but died of trismus the ninth day. The mother made a tolerably good recovery, notwithstanding the feverish symptoms induced by the suppression of the milk secretion from the death of the infant. It was a couple of months, however, before the cicatrization of the wound was complete. She again became pregnant in January, 1843, and about the fourth month a small ulcerated point made its appearance on the right side of the abdomen, about a hand's breadth from the cicatrix. It daily increased till it attained the size of the palm, when the feverish symptoms, &c., induced her to apply for medical assistance. When raising herself on the 18th July, a slight cracking noise was heard, and the abdominal parietes gave way, as well as the uterus itself, allowing the fœtus, still surrounded with its envelopes, to project through the rupture. Before assistance could be procured the infant was dead; a midwife cut through the chord, and got the woman put to bed. Dr. Schrœder, who arrived about

an hour after this, separated the placenta, and removed some clots from the uterus. He could not ascertain the direction of the rupture through the walls of the uterus, but that through the abdominal parietes was transverse, and crossed the line of the Cæsarean cicatrix. The edges of this wound were swollen, soft, œdematous, and unequal, and as they seemed as if unable to bear stitches, adhesive straps were used to bring the edges in contact. The fever of reaction which followed was slight; a considerable quantity, however, of bloody sanies flowed out each time the wound was dressed. Acute pain was shortly after complained of at each extremity of the wound, which assumed a gangrenous appearance, and discharged a very fetid sanies. Under quinine the state of the wound gradually improved; but she was again thrown back by a rheumatic affection, and then by the formation of an abscess in the left inguinal region, accompanied with œdema, and partial paralysis of the corresponding limb. Under tonics and generous diet the wound slowly healed, though the old ulceration of the surface continued to be the seat of painful sensations. By the 5th of October, the cicatrization of the wound was complete; she suffered no pain; had recovered her usual appearance; her menses had reappeared; and she was able to resume her household duties. The transverse cicatrix was situated four inches below the umbilicus, and measured four inches one line in length. It was very uneven and presented many unequal dilatations. The parietes over it, and the seat of the old ulcer, were very soft and thin.—*Edinburgh Med. and Surg. Journal.*

MEDICAL INTELLIGENCE.

Transylvania University and the Navy.—The "Observer and Reporter," published at Lexington, Ky., has been sent us, containing a reply from the Dean of the Medical Faculty of Transylvania University, to an article in the New-York Herald, of April 7th. The Herald published a letter in which the writer asserted, "that at the last examination of applicants for the appointment of Assistant Surgeons for the Navy, out of thirty examined, only sixteen were found qualified, and that the fourteen rejected as incompetent, were graduates of the Medical Colleges of Lexington, and Cincinnati." In answer to a communication from the Faculty of Transylvania University, Surgeon Barrington of the Navy Board, says, "it gives me pleasure to state, that of the candidates for admission into the Medical Department of the Navy, rejected by the last Board of Naval Surgeons, not one was a graduate of either Lexington or Cincinnati. Nor has any graduate of the Transylvania University yet presented himself before any Board, of which I have been a member."

University of Pennsylvania.—At the Commencement of the University of Pennsylvania, held April 4th, 1845, the degree of Doctor of Medicine was conferred upon one hundred and sixty-four persons—two of whom were from Georgia, and three from South Carolina.

Obituary.—We regret to have to record the death of Professor Thomas Sewall, M. D., of Washington, D. C., which occurred on Monday, the 10th instant, in the fifty-ninth year of his age. Dr. Sewall was a native of Augusta, in the State of Maine. He graduated at the Medical School of Boston, and about the year 1820 removed to the City of Washington, where his talents and acquirements, with an upright deportment and great urbanity of manners, soon procured for him the respect and patronage of a large portion of the inhabitants. He was appointed Professor of Anatomy in the Medical School of that place on its first organization, and continued to discharge the duties of the Chair, with distinguished ability, until the time of his death. By the public prints we observe, that the members of the profession of the city in which he resided, and the students of the College to which he was attached, adopted suitable measures to express their grief for his loss. Beside these, his remains were followed to the grave by a large concourse of people, including a number of eminent statesmen, and the distinguished citizens of the place.—*Medical Examiner.*

METEOROLOGICAL OBSERVATIONS, for April, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west Wash.

Apl.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sunrise.	3, P. M.	Sunrise.	3, P. M.		
1	58	76	29 7-10	29 8-10	s. w.	Cloudy to 12, M.
2	44	79	29 9-10	29 9-10	w.	Fair.
3	44	82	29 9-10	29 9-10	s.	Fair. [thunder.
4	50	85	29 8-10	29 8-10	s. w.	Fair—some drops of rain, and
5	50	81	29 7-10	29 6-10	w.	Fair. do. do.
6	58	60	29 6-10	29 7-10	w.	Cloudy—sprinkle.
7	51	68	29 7-10	29 7-10	w.	Fair.
8	45	64	29 8-10	29 9-10	n. w.	Fair—windy.
9	37	62	30 1-10	30	n. e.	Fair.
10	39½	76	29 9-10	29 7-10	s. w.	Fair.
11	54	84	29 7-10	29 7-10	n. w.	Fair.
12	56	78	29 9-10	29 9-10	e.	Fair.
13	44	81	29 9-10	29 8-10	s. w.	Fair.
14	50	84	29 8-10	29 7-10	s. w.	Fair.
15	59	88	29 7-10	29 7-10	s. e.	Cloudy.
16	62	84	29 7-10	29 7-10	s. w.	Cloudy to 12, M.
17	65	86	29 7-10	29 7-10	s. w.	Fair.
18	60	85	29 7-10	29 8-10	s. w.	Fair.
19	60	88	29 7-10	29 7-10	w.	Fair.
20	64	88	29 7-10	29 6-10	w.	Fair.
21	58	83	29 7-10	29 7-10	n. w.	Fair.
22	55	83	29 7-10	29 7-10	n. w.	Fair.
23	62	82	29 8-10	29 8-10	s.	Cloudy.
24	62	87	29 8-10	29 8-10	s. e.	Fair.
25	64	84	29 8-10	29 7-10	s. w.	Cloudy.
26	64	87	29 7-10	29 7-10	s.	Variable.
27	68	90	29 8-10	29 8-10	s.	Fair—thun. and light. at 9, P. M.
28	64	86	29 8-10	29 8-10	s.	Fair.
29	60	88	29 9-10	29 8-10	s. e.	Fair.
30	58	86	29 9-10	29 8-10	s. e.	Fair.

33 Fair days. Quantity of Rain, none. We had no rain from the 24th of March to the 12th of May—a period of 49 days.

SOUTHERN MEDICAL AND SURGICAL JOURNAL.

Vol. I.]

NEW SERIES.—JULY, 1845.

[No. 7.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Remarks on the use of the Sub-Nitrate of Bismuth in certain gastric derangements. BY I. P. GARVIN, M. D., *Professor of Materia Medica, &c., in the Medical College of Georgia.*

The utility of the Sub-nitrate of Bismuth in certain painful affections of the stomach, has been known to the profession, ever since the publication of Odier, of Geneva, who was the first to employ it internally. In presenting the remarks which follow, we are therefore not to be understood as claiming any originality, either as to the mode of its action or application. Our sole object is to invite attention to a most valuable remedy which we think is too much neglected. Notwithstanding the length of time which has elapsed since the remedial powers of the sub-nitrate were made known, and the numerous facts which prove its value, some of the best writers on the materia medica have failed to notice it at all. Under these circumstances we have thought that a few cases illustrating its beneficial effects, would not prove unacceptable to the readers of the Journal.

Bismuth has been employed with benefit, in the vomitings of children which are connected with dentition, in the diarrhoeas which attack feeble infants upon slight causes, and in those which follow acute diseases, but are unattended by fever; but these and some other applications of the article we do not intend now to notice, but shall confine our remarks to its effects in some of those nervous de-

rangements of the stomach, which prove so distressing to the patient and harrassing to the practitioner. Our observation has satisfied us that such nervous affections of the stomach, and indeed many other nervous diseases, are of more frequent occurrence in malarial regions, than in such as possess a salubrious atmosphere. Nor is this fact at all surprising, when we consider that it is upon the nervous system that malaria exerts its principal morbid influence as is proven by its agency in the production of intermittent fever—a disease, confessedly of nervous origin. These diseases of the stomach, like most nervous affections, are usually paroxysmal, and whilst relief is most urgently demanded during the sufferings of the paroxysm, the patient, and sometimes the physician, neglects the radical treatment, which can only be carried on during the intermissions.

CASE. The first case in which we obtained very marked benefit from the employment of the bismuth, was in that of a female, of a spare habit, nervous temperament, and about forty years of age. In the early part of the summer, she had an attack of fever in Florida, from which she seemed to have entirely recovered. In the month of September she had a succession of violent paroxysms of gastralgia, occurring at irregular intervals, sometimes of one or two weeks. During the three or four earlier attacks, she was from home, and the care of the case devolved upon another physician, but we learned that she had taken morphine, chloric ether, and other similar remedies for the agonizing pain. Between the paroxysms she was directed to use the sulphate of quinine, in doses of several grains each day. This article, however, appeared to have exercised no beneficial influence, for though it had been regularly taken, the disease had renewed its assaults. The first attack in which we saw the patient lasted about three hours: her face was pale—the skin bathed in a cold sweat—the pulse soft, small, and but slightly accelerated—there was an occasional vomiting of a fluid resembling very much the black vomit of yellow fever—and there was pain in the epigastric region of a most distressing character. A large dose of the acetate of morphine was administered, and as the last matters ejected from the stomach were mixed with blood, to the great alarm of the patient, with the morphine was combined four or five grains of the acetate of lead. The relief afforded by the combination was almost instantaneous, so much so that the patient expressed some curiosity to learn what she had taken. At first we were disposed to attribute the usual promptness with which the anodyne acted, to

some modification of the condition of the stomach produced by the hemorrhage, but from subsequent trials of the combination of the acetates of morphine and lead, in this, as well as in other cases of a similar character, we are satisfied that the acetate of lead was also an inefficient agent in the production of the beneficial effects, probably by virtue of its sedative action on the irritated mucous membrane, and by restraining the acrid secretions from the gastric surfaces, thereby preventing the irritation which they must excite on these morbidly sensitive parts. After the paroxysm we have just noticed, our patient continued the use of the quinine for some days, when she was again violently attacked. We should have mentioned before, that these attacks did not seem to depend at all upon the ingestion of food, either in too great quantity, or of an indigestible quality. In this instance, a small quantity of rice was the only article which had been taken into the stomach. On this occasion, as before, the combinations of the acetates of lead and morphine gave prompt relief. The patient was then put upon the use of small doses of blue mass in conjunction with quinine, but the paroxysms continued to return. Having employed the bismuth in some other gastric derangements with benefit, and knowing that in the hands of others it had been found useful in cases very similar to the one under treatment, we abandoned the further use of the mercury and quinine, and put the patient upon the use of the sub-nitrate in doses of two grains three times a-day, increasing the dose one grain every two days. From the day on which she began the use of this remedy *she had no return of the disease*. Her general health improved, and she remained free from this complaint up to the time of her death, which occurred about a year subsequent to the cure.

The next case was one very similar in its general features to the foregoing. The patient was a female of a corpulent habit, and about thirty-five years of age. Her health had been good up to the latter part of the summer, at which time she had an attack of intermittent fever, from which, however, she soon recovered, but was soon after attacked with paroxysms of gastralgia, occurring at uncertain intervals, and lasting from one to eight or nine hours. The duration, however, was generally two or three hours. As the earlier paroxysms were short, and as she lived at a considerable distance, she did not apply for medical aid until the attacks had become of very frequent occurrence, and more protracted in their duration. When we first saw her she had been laboring under a very violent paroxysm

for some hours. Her skin was cold and bathed in sweat, the pulse feeble and very slightly accelerated, and she vomited frequently considerable quantities of an acrid and nearly colorless fluid. The acetates of morphine and lead were administered, and relief of the pain promptly followed. As there was loss of appetite, with a sallowness of the skin, and a deficiency of bile in the evacuations, she was put upon the use of small doses of blue mass. Her skin soon became clearer, and her appetite and general health improved, nevertheless the paroxysms of gastralgia continued to return, though they were neither so frequent nor so violent. She was then put upon the use of the bismuth, and from that day to the present time *she has had no return of the complaint.*

The third was one of a different character. The subject was Miss ———, of a rather spare habit, and about thirty years of age. For a long period she had been subject to attacks of vomiting, which would continue from two or three hours to as many days. During these attacks the stomach would be thrown into the most violent contraction by the introduction of the smallest quantity of even the blandest fluid. Her skin was cool and moist, and her pulse feeble, though not at all increased in frequency. In her most violent attacks she was affected with spasms. Upon the subsidence of the vomiting, a rash, very much resembling that of scarlatina, generally appeared upon the skin. She had gone through the whole catalogue of anodynes and antispasmodics. In one paroxysm an article would give relief, which would fail entirely in the next, but it not unfrequently happened that all failed. The dread of the return of the vomitings embittered the life of this lady, and led her to practice an almost entire abstinence from all the common articles of food, except those of the most digestible kind, and in very small quantities. After a trial of various medicines, (quinine among the number,) she was put upon the use of the sub-nitrate of bismuth, which was continued, with occasional intermissions, for a considerable length of time. After discontinuing the remedy, she had a slight return of her old complaint, but with this exception she has remained free from the disease to the present time.

We are informed by Dr. Joseph A. Eve, that he has also employed the bismuth in several cases of gastric disease of a painful character, with the most marked benefit. He generally combines with its use, the employment of small doses of blue mass. The mercury he discontinues in a short time, but increases the doses of the bismuth regularly.

Dr. Dugas also informs us that he has used it frequently, and with almost invariable success, in those annoying sensations of oppression or pain in the epigastric region, so common with ladies of a delicate constitution and sedentary habits. In such cases he prescribes five or six grains to be taken about an hour before each meal, until relief be obtained, and then morning and night for a few days longer.

We have also used the article in several cases of dyspepsia, but have not witnessed any very marked benefit from its employment, except in those instances where pyrosis was present. In such cases we had much reason to be pleased with its effects.

If the mode of action of bismuth were well understood, it is probable that it would be found useful in other diseases than those in which it is now employed, but its *modus operandi* is exceedingly obscure. "If we endeavor to ascertain," says Trousseau, "the action of the sub-nitrate of bismuth, we will be much embarrassed; no intermediate effect between the employment of the medicine, and its curative results, can be perceived. Notwithstanding the attention we have given to it, we have not been able to perceive the least influence on the general functions. When an individual in good health takes the sub-nitrate of bismuth, the only phenomenon to be noticed is constipation, but the nervous functions, the animal heat, the movements of the heart, the urinary and cutaneous secretions, are not influenced in an appreciable manner." We can therefore only infer the nature of its action, from the character of the derangements in which it operates beneficially. As these are characterized by an exaltation of the nervous sensibility, the medicine is supposed by Trousseau to possess sedative properties, and to be also somewhat astringent. Merat and De Lens rank it as a sedative, acting directly on the surface to which it is applied, and not as the opiates. Dr. Wood considers it as tonic and antispasmodic. We think that it is an error to attribute to it any astringent property. Its effect in constipating the bowels, and in arresting certain diarrhœas is evidently due to its property of reducing the nervous sensibility.

Considerable fear is entertained by some lest poisonous effects should follow the use of bismuth. It is true, that when imperfectly prepared, it may contain a small portion of arsenic in the form of an arseniate of bismuth, and to the presence of this substance must any ill consequences be attributed which may follow ordinary doses, for when the sub-nitrate has been prepared from the pure metal, precipi-

tated and well washed, no danger need be apprehended though the dose should be carried to half a drachm, or even more. However, in over doses, even the pure sub-nitrate may produce alarming effects, such as great gastric distress, vertigo, drowsiness, &c.

ARTICLE II.

Strangulated Omental and Intestinal Hernia—operation and recovery.

By CHARLES WEST, M. D., of Waynesboro', Ga.

On the 17th September, 1841, I was called at midnight to see a negro, (John,) in consultation with Dr. S. I found the patient suffering from a tumour in the left scrotum, very painful on pressure, red, shining and elastic. The attack came on about twenty hours previously when in the act of throwing a heavy piece of wood from a wagon. He has had constant nausea for six or eight hours, with frequent vomiting, and one or two scanty stools without relief. The paroxysms of pain were intense, extending over the whole abdomen, with an increase of nausea at each return of pain; the pulse was 100, strong and corded. He says, that about twelve years ago, he had a similar accident, which was relieved only after great efforts, and aided by the use of the tobacco enema. He has always felt a considerable thickness in the scrotum since that attack, and has had frequent returns of the enlargement coming on gradually after making any great effort—but he has always succeeded in relieving himself by sitting in cold water—this relief occurring gradually during two or three hours, and never suddenly. At the present time the presence of an ancient omental, and a recent intestinal hernia, is clearly perceptible.

Persevering efforts at the taxis alone, and then the tobacco enema producing great relaxation, followed by renewed efforts, were used for several hours without success. Venesection and the warm bath, both carried to fainting were then resorted to, with as little success.

After exhausting every means which was thought capable of averting an operation, the latter alternative was advised at 8 A. M.—Through the opposition of both master and servant, the operation was postponed till night, about forty hours after the beginning of the

attack. At this time the tumour was red, glossy, hard, and very painful, the whole abdomen very sensitive on pressure, the paroxysms of pain extremely severe—the pulse 140, small and feeble. There was nausea, but no vomiting.

The cremaster muscle was found to have lost its fibrous appearance entirely, and seemed confounded with the serous membrane beneath. The division of the hernial sac permitted about an ounce of serum to escape, and brought into view a portion of omentum. This was found closely adherent to the tunica vaginalis, the false membrane being very strong, and requiring the use of the point of the knife to detach it. When dissected from its adhesions, it measured six inches in length, four in breadth, and one in thickness. Beneath this, a fold of intestine was found of a dark red color, so closely strictured, that it was impossible to draw out any portion, or to return it. At the external ring there was no stricture, though the omentum had formed close attachments to the whole inguinal canal, and seemed sufficient to compress strongly the intestine. At the internal ring, a stricture was found so rigid and close, that the finger nail could not enter. From the presence and adherences of the omentum, the stricture was with difficulty divided, by using a small conductor, and a sharp pointed bistoury; the probe-pointed bistoury and Sir Astley Cooper's hernia knife, being both too thick to pass between the intestine and fibrous cord, though repeated efforts were made to effect it. Having returned the intestine, the omentum was next cut off close to the abdominal fascia with little or no hemorrhage. The wound was dressed with four sutures, and adhesive strips. Four hours afterwards, a blister was applied over the whole lower abdomen, though complete reaction did not take place until several hours had elapsed, and about the time of the drawing of the blister.

A saline cathartic was then given, which did not operate till eight hours after. The wound cicatrized without difficulty, and on the twenty-first day the patient was discharged. For three months after he suffered severe colic pains after eating indigestible substances, but these gradually disappeared. There has been no return of hernia.

This case has been recorded, not for any thing remarkable in its history, or the operation, but as connected with some reflections which it suggests.

1st. The necessity of carefully examining every case of hernia after the reduction has taken place, so as to avoid, if possible, leaving any portion of omentum in the sac unreduced, since it will render

an operation at some future day inevitable, and by prolonging and complicating the operation, increase the danger of the patient.

The presence of an unreduced omentum, though small, renders the use of a truss highly dangerous, and if large, doubly so, from concealing the presence of a small nucleus of intestine from even a careful observer. The irritation produced by that instrument always causes a thickening of both omentum and intestine, and renders reduction without an operation a matter of impossibility.

2d. The diagnosis of this case was materially aided by attention to its history since the previous accident. The constant presence of something not intestine, in the scrotum of that side, its volume frequently increased by bodily effort, and always relieved, not by pressure, or favorable position, but by the use of cold water, not suddenly with a gurgling noise, but gradually, seemed to point out the existence of an old omental hernia, which was confirmed in the sequel.

ARTICLE III.

An Essay on the Abuse of Diuretics—some of the morbid conditions of the Urinary Organs arising therefrom, and their Treatment, with Cases:—Read before the Medical Society of Augusta, June 7th, 1845. By H. F. CAMPBELL, M. D., Demonstrator in the Medical College of Georgia.

In the selection of a subject for this essay, the above particularly urges itself upon my attention—first, from its great importance in a pathological and therapeutical point of view; and secondly, from the fact that, I have recently had occasion to deplore the pernicious effects of the abuse of this class of medicines, in several interesting cases.

In the relation of the few following cases, every practitioner may recognize, perhaps, many similar coming under his own observation, wherein the empirical efforts of the patient to relieve himself, have so complicated his primary disease, as to render the treatment very unsatisfactory to the physician, and ultimate cure almost hopeless.

Diuretics are that class of medicines, which increase the secretion of the kidneys, and the term owes its etymology to the two Greek

words *sic*, by or through, and *expeo*, I pass the urine. All agencies which, directly or indirectly, exert an influence on the urinary organs, producing an increase in their secretion, may with propriety be termed diuretics; hence these agents have been classed under two heads, direct and indirect diuretics: the direct are those substances that produce a specific action upon the kidney through the circulating fluid, and which if injected into the blood in proper doses, would by selection, exercise their specific influence upon these organs; and secondly, the term is applied to any agency which under certain peculiar circumstances has in any way become the cause of diuresis; among these are diluents which by increasing the amount of the circulating fluid, will consequently produce an increase in the urinary secretion, any diminution in the amount of the cutaneous or pulmonary exhalations will, from the antagonism existing between these great depurators, result in a proportionate increase in the urinary secretion; in exemplification of this we see cases daily, many indeed have come under my own observation, wherein the patients had been subject to irritability of the bladder, and invariably on the advent of inclement wet weather the disease became aggravated, even producing hæmaturia, from the increase in the urinary secretion consequent upon the diminution of the cutaneous exhalation.

Depletion and other antiphlogistic means, under certain circumstances, become powerful diuretic agents; when there exists an inflammatory condition of the kidneys, interfering with their secretion, blood-letting, by removing this condition, re-establishes the normal functions of these organs; nauseants also act in this way beneficially by controlling the circulation in nephritis; indeed the means and circumstances which, in certain conditions of the system may induce an increase in the urinary secretion, are multifarious and innumerable.

While I have deemed it proper, thus at the beginning of this essay, to glance briefly at the normal *modus operandi* (if I may use the term) of this class of therapeutic agents, it would perhaps be superfluous to enter into further detail of such action; I will therefore now consider their improper application, and the morbid conditions in the urinary organs thus superinduced.

On a review of distinguished authors on urinary diseases, the abuse of diuretics stands among the first on the list of causes producing derangement in this set of organs, of which the proper exercise of the functions is so eminently important, and the morbid condition or im-

perfect action, so surely entail a life of misery upon the patient. M. Chopart, in his valuable treatise on the diseases of the urinary passages, has occasion more than once to deplore the sad havoc caused by the improper use of diuretics, and relates at length cases, wherein some of the most obstinate affections of the kidneys and bladder have been the direful result of the injudicious use of this class of remedies. He deprecates their abuse by empirics, and by patients themselves; indeed there is scarcely a disease of the kidneys or bladder reviewed by him, wherein he does not cite this as an occasional cause of that morbid condition of those organs upon which it depends. In his chapter upon the vices in the secretion of the urine, he mentions the abuse of diuretics first, among those causes which superinduce the diseased states giving rise to such vices. In nephritis it is often the cause of the inflammation, by too actively promoting the flow of blood to the kidneys, impeding their functions, and giving rise to ischuria and all its attendant evils. I have frequently found this a cause of simple retention of urine from the violent irritation of the neck of the bladder, producing either tumefaction or spasm at that portion of this organ; but what I have found, and this is the case in most of the reports on this subject, the most frequent result of the abuse of diuretics has been an irritable state of the bladder and kidneys, attended with incontinence of urine and hæmaturia; and it is more especially to this particular condition of the urinary organs that I wish at present, most respectfully to call the attention of the Society, adducing a few cases with the treatment found most efficient for their relief.

There is perhaps nothing more common, and yet nothing more trying, to practitioners in their intercourse with patients, than the empiric treatment to which they almost invariably subject themselves in venereal diseases, before submitting to the advice of a physician. More than two-thirds of the cases we are called upon to treat, have perhaps run the gauntlet of all the alleged remedies the patient has ever heard of, and when at length, application is made to a physician, the *primary* affection forms but a part of the difficulty to be surmounted.

CASE 1st. Not long since, I was called upon to treat what the patient called a very obstinate case of gonorrhœa. Mr. K. said that notwithstanding the most active treatment, his disease had increased in violence. until he became alarmed and bought four ounces of balsam copaiba, and took the whole of it in two days, and in spite of all, the

burning and discharge continued, and when he urinated, (which was very often) he passed apparently all blood—and indeed he was in a deplorable condition: the bladder was so irritable as not to retain an ounce of urine; the hæmorrhage so abundant as to be rapidly exhausting his strength; and he at the same time complained of severe pain in the lumbar region—the discharge, it is true, still existed, but it was only of minor consideration in the sum total of his ills. He was treated with rest in the horizontal position, and a styptic powder of alum, kino and opium, to be repeated more or less frequently according to the amount of hæmorrhage, with demulcent drinks and an occasional dose of camphor water, to allay irritation at the neck of bladder. After the hæmorrhage was somewhat checked by this treatment, the buchu and uva ursi were steadily applied in the form of the compound syrup repeated three times a day, and the cure was complete in less than a week. The gonorrhœa was afterwards relieved by a lunar caustic injection followed by mild diuretics.

It is remarked by Dr. Willis, in his learned and concise Treatise on Urinary Diseases and their Treatment, “that, in certain morbid conditions of the kidney, the increase in the quantity of urine poured out by that organ, is followed by unusually frequent calls to relieve the bladder, and these calls have been observed to have this peculiarity about them, that they are singularly urgent when they supervene” —a remark that the following case, which is one like the above, of irritable bladder with hæmaturia, supervening upon the abuse of diuretics, will go in some measure to corroborate.

CASE 2d. Mr. B—— A——, a young man, aged 18 years, contracted gonorrhœa, and applied to an apothecary, who furnished him with a balsamic emulsion, which he applied with all diligence, till he had the disease as he thought, pretty well subdued: as he had anticipated, while taking the balsam and nitre, his urinary secretion was very much augmented, but a short time before applying to me, these calls had become so frequent and required such prompt attention, that he could not go into company at all, being obliged to void his urine with scarcely a premonition, after which he also passed a few drops of blood.

When I saw him, he was not laboring under hæmaturia, but complained of a constant uneasiness in the perineum and a very frequent and painful voiding of scant, highly colored urine; he also had a dull pain in the lumbar region and a sense of fatigue in the thighs and knees. The gonorrhœa had ceased, but in its place, he had su-

perinduced a nephritic condition of the kidneys and an irritable bladder. Under the antiphlogistic treatment, with rest in the horizontal position, followed by the full exhibition of buchu and uva ursi, with occasionally a little camphor and opium, he slowly recovered the tone of his urinary organs.

CASE 3d. Simon, a boat hand, had had gonorrhœa for some time, and been treated with balsam copaiba, of which he says he has taken a great deal. The Agent of the Company, supposing that the disease was slight, as there was no discharge, and as he could not well define his feelings, referred him to me for examination, previous to sending him with the boat. When I saw him, he had a dull, fatigued look, said he felt tired and heavy, and when asked where he had pain, complained of a vague feeling of uneasiness in the region of the bladder and in the perineum, and said he felt bruised in the lumbar region. The discharge had ceased: the pulse and respiration were natural—urine scanty and attended with slight burning.

Treatment—I applied a tartar emetic plaster to the lumbar region and gave an active cathartic—after its operation, he took half an ounce of syrup of buchu and uva ursi, three times a day, under which treatment he recovered in a week.

CASE 4th. Mr. M. Z—, aged about 35 years, had gonorrhœa, and took an emulsion of balsam copaiba, with oleum cubebæ, oleum pimentæ, and several other essential oils, making in all a very stimulating prescription;—this he had taken for a week, and the disease, though somewhat checked, was still very troublesome. When he applied to me, he was in the greatest distress, from the highly irritated condition of his urinary organs, in consequence of the almost *destructive* diuretic course, to which he had subjected them; he complained of severe pain in the lumbar region, which evinced much tenderness on pressure; pulse rapid and full, respiration somewhat hurried; his whole appearance indicated intense suffering. He voided his urine about every ten minutes, in small quantities, and very pale—for an hour or two before I saw him, he was unable to sit, from the severe pricking sensation in the perinæum which that position produced—his bowels were constipated, and had been so for several days. Treatment.—The patient objected to being bled, and to relieve his immediate distress, I administered ℥ij. of camphor water, with half a grain of sulphate of morphine; a short time after, four ounces of the compound decoction of buchu and uva ursi;—to relax the bowels I gave four comp. cath. pills. He afterwards continued to

use the decoction of buchu and uva ursi every three hours, with an occasional dose of camphor water. The effect was immediately and decidedly beneficial—he was well in three days. The gonorrhœa was afterwards successfully treated with the carbonate of potassa, dissolved in the syrup of buchu and uva ursi, to which was added a small portion of balsam copaiba.

The above cases I have adduced with the view of showing, as I have found them, the particular train of symptoms attendant upon that pathological condition of the urinary organs, superinduced by the improper use of diuretics, and also to offer my own experience, though limited indeed, in a remedy to which many ascribe but little specific influence over the urinary apparatus. With regard to the curative effect of uva ursi in urinary diseases, there exists among authors even at the present day, the greatest discrepancy; some claiming for it all the sanative power usually ascribed to a favorite remedy, while others contend that it is wholly devoid of any action whatever, save perhaps a slight tonic effect upon the system. Alibert, in reference to this article of the *Materia Medica*, says: “All that can be said of this remedy is that, its action is, under certain circumstances, manifestly diuretic,” and he denies it any influence whatever over nephritic and other diseases of the urinary organs. Dr. Farriar speaks favorably of it, in some *few* instances, and reports twelve out of sixteen cases of urinary disease relieved by it, though the value of the deduction from these cases is somewhat impaired by the fact, that he combined its application with other acknowledged, and very efficient remedies for the same affections.

M. Bielt, in his valuable contribution to the *Dictionnaire des Sciences Médicales*, on this subject, evinces but a feeble belief in the specific virtues of this plant, in diseases of the urinary organs, and advances in close relation with his own views, the experiments of Dr. Alexander, which tend to prove that it is scarcely endowed with diuretic properties, and coinciding with him, he further cites the high authority of Werthof, Acrel and Dr. Fothergill, who, he says, contest the question of its efficacy with some degree of reason; and later, we have the opinion of Sir Benj. C. Brodie, who in his excellent *Practical Lectures on the Diseases of the Urinary Organs*, confesses with his wonted candor, his comparative want of success, with the remedy in question, in the following words: “The uva ursi has the reputation of being useful as a remedy for chronic inflammation of the bladder. I must say however, that this remedy has generally disappointed me

in these, and that I have not seen those advantages produced by it, which the general reputation of the medicine had led me to expect." And in another lecture, while he extols the other article in the combination used in the above cases of urinary disease, the *diosma crenata* or *buchu*, he again expresses his unbelief in the virtues of the *uva ursi*.

Indeed with such decided, adverse testimony, from the very exalted authority above quoted, it would appear even unscientific to hold an opinion very favorable to the specific action of *uva ursi*, in certain diseases of the urinary organs, could we not, on the other hand, adduce a weight of authority equally as respectable. Galen, it is rather suspected by Dr. Murray, in his treatise on this subject, recommended the *uva ursi* under the name of *αρκυον σταυλον*, as a remedy against hæmoptisis. The physicians of Montpellier, and more recently De Haen, as M. Bielt remarks, have singularly contributed to spread the use of it in these modern times, and since them we have the testimony of Model, Gerardi, Joseph Quer, and Dr. Murray—all of whom speak in the highest terms of its efficacy, and Joseph Quer more especially in his "Dissertation on the Nephritic Passion," published at Madrid, 1765, lauds it as "the *veritable specific*."

Although the majority of the above cited authors have valued the *uva ursi*, more particularly for its supposed virtues as a lithontriptic, a class of medicines which were since exploded by the chemical experiments of M. M. Vauquelin and Fourcroy, on calculus, and which now are but little esteemed by the profession; still I have deemed it expedient to adduce them, inasmuch as, in their hands, the remedy invariably exerted a decidedly beneficial influence over the urinary organs in certain states of disease. Later we have the favorable testimony of Dr. Farrair, Dr. Eberle, and Dr. Chapman, and lastly, we may quote Dr. William Prout, perhaps the highest practical authority on diseases of the urinary organs now extant. This author, in his justly styled "elaborate and profound" treatise on "the stomach and renal diseases," recommends it in terms of the highest praise for its astringent and tonic effect, in many diseases of the kidney and bladder, among which are the secretion of serous urine, suppuration and abscess of the kidney, chronic inflammation of the bladder, with cystorrhœa, &c.

In the cases given above, of disease of the urinary organs from the abuse of diuretics, the *uva ursi* has been administered in combination with *buchu*, which latter is rendered a very proper and efficient addi-

tion in such cases, from its demulcent and slightly balsamic character, which last principle is said* to act topically upon the secreting organs, as it passes through them, while it adds materially to the tonic effect of the bear berry upon these diseased surfaces. The forms in which I have applied the remedy most frequently, have been in that of the decoction of the uva ursi and infusion of buchu, given three times a day, in portions of two ounces each; but a preferable preparation is the syrup, prepared from the leaves of these two plants, with a sufficiency of sugar to prevent fermentation. This mode of administration, while it combines all the virtues of the two plants, is not obnoxious to the almost invariable objection made to their employment in substance, or even in decoction, their liability to nauseate: indeed Dr. Lewis complains that in all the cases wherein he has administered the uva ursi, it has produced the most distressing nausea.

I have used the buchu and uva ursi in one or two instances, in other affections of the urinary organs than those, the result of the abuse of diuretics, but with indifferent success; and its effect was only appreciable after a long continued administration; but in the above named cases, where there was but little organic lesion, and also in the dysuria and violent irritation, attendant upon the absorption of cantharides from a blister, their action has appeared to me, generally prompt and effectual in removing the most distressing symptoms.

* Pereira's Materia Medica and Therapeutics. Vide Art. Diosma Crenata.

ARTICLE IV.

A Case of Hydrocele twenty-three and a half inches in circumference and containing thirty-seven ounces of serum—cured by Iodine Injection. By PAUL F. EVE, M. D., Professor of Surgery in the Medical College of Georgia.

In November last, as will be perceived by the following extract of a letter from my friend Dr. Wm. J. Johnson, an intelligent practitioner of Fort Gaines, I was consulted in reference to a case of hydro-scarocele. "I write you this at the request of a friend of mine, Barnett Cody, of this (Early) county. He is a worthy citizen and most estima-

ble man, somewhat past fifty years old, and the father of several children. Some four or five years since a small tumour was detected at the bottom of the scrotum, which has continued gradually to enlarge to the present time. The old gentleman being very modest felt a great disinclination to consult a physician, and would doubtless have concealed his condition until now, or even longer, if he could, had not the tumour increased so much in bulk as to have attracted the notice of his friends and annoyed him greatly by its weight. Yesterday he visited this place for the purpose of consulting me, and I made a thorough and critical examination of the tumour. It is now quite large, and would weigh, I have no doubt, could it be extirpated without loss of blood, at least five or six pounds. It is attended as yet with no pain. It feels hard and unyielding. There is no discoloration of the integuments, no ulceration, no abrasion of surface. The veins at the bottom of the scrotum are quite enlarged, and appear turgid and full. The swelling within the last year has progressed upwards, towards the abdominal ring, and the spermatic cord with its tegumentary envelope are prodigiously enlarged. I should say the track of the cord was as large as my arm. Mr. C. informs me that he was many years ago a hernial subject. The hernia occupied the right side, but he has been radically cured of that affection for at least twenty years. The tumour which he now has, is confined to the right spermatic cord and right testicle—the penis and left testicle being perfectly healthy.

I cannot detect the presence of the testicle as a distinct body in the tumefaction. The tumour does not feel uneven or rough or knotty or doughy; but is quite even and possesses considerable elasticity. May it not be an hydro-scarcocele? I suppose it will require a surgical operation, and have advised my friend to visit you as soon as possible."

In December last, Mr. Cody arrived in Augusta, and on the 30th of the same month, he was prepared for the operation. I found the case so accurately described by Dr. Johnson, that I have not a word to add to it. The tumour measured twenty-three and a half inches in its longest circumference, and having punctured it with the trocar, I drew off by the canula thirty-seven ounces of straw colored serum. The testicle on this (right) side, was now found to be twice the size of the other. My patient experiencing some pain and being threatened with syncope, was placed in the recumbent position, and drank some water. In from five to ten minutes I injected tr. iodine six drachms to eight ounces of water. The pain was felt to be increasing in a minute or two, and the injection was allowed to escape. Mr. C. suffered considera-

bly for two hours, to moderate which, morphine was given and a warm poultice applied over the scrotum.

Dec. 31st. Had not slept—the patient attributes it to the morphine. Very little pain was experienced. Diet, absolute.

Jan. 1st, 1845. Patient is doing well. A little more tumefaction, though no increase of pain in scrotum.

2nd. Ordered a dose of oil. Diet, gruel, tea and bread.

3rd. Patient doing well.

4th. Tumefaction of scrotum considerable; feels doughy. Punctured the cicatrix of the trocar with lancet, and it bled freely, nearly two ounces of venous blood. Swelling greatly abated.

5th. He feels well, and now thinks the operation will succeed. Diet increased. The patient up, dressed, and moving about the room for the past day or two.

6th. Started home (a distance of 300 miles,) by easy stages, in his carriage.

The following letter, addressed to me by Dr. Johnson, two months and a half after the operation, will give the result :

“FORT GAINES, 14th March, 1845.

“Dear Doctor,—I have purposely postponed writing to you in reference to the case of my friend, Barnet Cody, Esq., on whom you operated for Hydrocele, in order to ascertain whether the operation has been successful in effecting a permanent cure. I saw Mr. C. on last Tuesday, and made inquiries concerning the result of the operation. He informed me that his affection first made its appearance about five years ago. The tumour for the first two or three years enlarged gradually, but for the past two it increased rapidly, reaching nearly to the knees, and being so bulky and unwieldy as to incommode him in walking or sitting; and the deformity occasioned by its presence caused him to shun society and confine himself to his house. The swelling upwards towards the abdominal ring, along the course of the spermatic cord, commenced only a few months before he consulted me, and was very rapid. You know the shape, form, dimensions, &c., of the tumour, when he presented himself to you in December last, the amount of serous fluid evacuated, the treatment pursued, &c., up to the time of his leaving Augusta. Upon his return home, Mr. C. was under the fearful apprehension that the operation had been unsuccessful, but he is now thoroughly convinced that it has succeeded in effecting a radical cure. You wrote me that one of the testicles was enlarged to about twice the usual size; that enlargement continues, and I suppose

will be permanent. The cavity of the sac is entirely obliterated, and the scrotum is but little larger, if any, than in its normal state.

"I informed Mr. Cody that you had written me requesting to know the result of the operation, that you might make a report of the case for the Southern Medical and Surgical Journal. He expressed a desire to have it made out and published, even giving his name, residence, &c." * * *

I heard of Mr. C. a few days ago, and learned that he was well and attending to his ordinary business.

PART II.—REVIEWS AND EXTRACTS.

Some of the Diseases of the Heart. By C. J. B. WILLIAMS, M. D., F. R. S., *Professor of Medicine in the University College, &c. London.* (Concluded.)

Now, we come to a subject of much more frequent occurrence, and more important in a practical point of view:—*Disease of the valves and orifices of the heart.* We have hitherto considered diseases of the muscular fibres and of the membranes covering them, and we have now to attend to the lesions of the mechanism by which the circulating current is directed and conducted from the heart. We now come more especially to the diseases of what may be termed the hydraulic apparatus of the heart, in contra-distinction to that of the muscular structure, or the dynamic apparatus of the heart.

Now, it is desirable to divide the diseases of the orifices and valves into two great classes. First, there are the obstructive lesions—where there is more or less obstruction to the current of the blood in its proper channel; and secondly, those that occasion the blood to take a reverse direction, or a backward course, and these may be called regurgitant diseases. Now, the lesions that produce these different affections are very numerous, and I will describe the chief of them under different classes.

First of all, those which are allied to the affections we have already considered, as connected with *endo-carditis*. 1stly. Under this head may be mentioned a thickening of the endo-cardium, causing a similar condition in the valves. Sometimes this resembles a deposit of lymph, as in cases of recent endo-carditis—a sort of fibrous matter on the surface. This may occur in various parts. It is found at the semi-lunar valve, giving rise to a thickening of the margin of the valves, and often

taking a peculiar shape from the contact of one valve with another. It very commonly happens that there is a thickening of the membrane, deposited in the shape of a festoon, or what is called a scutiform thickening of the valve. The pressure of the valves against one another, modifies the appearance of the deposition; generally, the valves are thickened to a considerable extent, there being little vegetations round their margins: the orifice of the valve is also sometimes a little fringed. In one case that I witnessed, there were as many as eighteen of these fibrinous tumours, connected with the cords of the tricuspid valve. Another effect of this deposition is adhesion of one valve to another: this is a very common lesion. It is very common to find two of the aortic valves adherent to each other; so that instead of having three valves, you have but one valve entire, and the other two adherent, the intermediate portion forming a sort of projection between them. The effect of this is to cause an obstruction to the passage of the blood. The same thing may occur in the mitral, and more rarely in the tendons of the tricuspid valve.

2dly. There is another class of lesions included in some of the depositions I have already mentioned. Besides a deposition of fibrine on the endo-cardium, there is a thickening of the fibres and texture of the valve beneath this membrane, and the formation of a tense yellowish-white structure, so that the muscular portion becomes so altered as to a great degree to present that peculiar appearance which constitutes hypertrophy of the texture. This appears to be a deep-seated lesion, connected with a change in the muscular structure, besides an affection of the endo-cardium. Well, then, this probably arises from the formation of a sub-serous coat or texture, most commonly in the *laminae* of the valves, and the tendinous cords; and in connection with this hypertrophy, there is very commonly a sort of elongation in the fibres; and I have often found that where these deposits have taken place, there is an impaired elasticity, and a disposition to contract at one time, and to elongate at another, and, on that elongation, to break; thus producing great irregularity in the apparatus of the valves, and interfering with their proper functions. Sometimes this may lead to rupture of the heart. Frequently, in addition to this, there are small osseous deposits in the thicker portions of this fibrinous matter; and sometimes the tendons are quite thickened in this way. There may be various degrees of this. There may be a mere thickening—not interfering with the action of the valves, which is comparatively rare. Then there is a thickening with shortening of the valves, causing a partial closure of the orifice; and thickening with elongation, causing irregular enlargement of the opening. For instance, suppose thickening with elongation to take place, it has the effect of rendering the affected side of the valve quite loose, so that it never becomes tightened, and it cannot act perfectly at each systole; the blood gets behind it, and is forced by regurgitation backwards into the different cavities. This will, eventually, produce lesions of the heart itself.

3dly. Another thing to be considered is that affection of the orifices,

in which there is an osseous or cartilaginous rigidity, especially at the aortic orifice, causing thus an obstruction to the circulation. Deposition is extremely common at the root of the aortic valves, causing obstructive disease, without any actual projection of these processes. The most remarkable form of deposition of osseous matter is a cohesion of the valves, causing almost a complete closure of the orifice, or so reducing it as to make it only capable of admitting a tube of the size of a crow-quill. The same thing occurs with regard to the left auriculo-ventricular opening. This adhesion of the laminae of the valves reduces the orifice to one-fourth or one-fifth of its natural size, causing obstructive disease. This state is always combined with regurgitant disease. You seldom see this without some regurgitation into the ventricle, or auricle, through this narrow orifice.

4thly. There is another kind of thickening, attended with a sort of disposition to ulceration, or at least, to rupture. This usually affects the aortic valves, and is one of the most serious diseases to which the heart is liable; in which the valve is broken down, leaving only a rim or a sort of cord across the orifice of the artery; the other valves are here very much diseased likewise: it is generally the result of a degree of acute inflammation, involving not only the membranes, but also the deeper-seated structure. Persons addicted to habits of intoxication are subject to this form of disease.

5thly. There is atrophy of the substance of the valves; this may take place simultaneously with thickening of their lower portions; and if it is extensive, it must produce serious results, leading to considerable regurgitation. Shortening and atrophy of the valves is not a very common disease. It may, however, vary very considerably in extent, the laminae, in some cases, being much longer than in others. With valvular imperfection, there is generally hypertrophy, or dilatation of the heart, or both. I have already mentioned that this combination has been usually considered a great aggravation of the mischief; but I am quite sure, in many cases, it is so far from being an aggravation, that it is rather a compensation; and the effect of this, at least of hypertrophy, and, perhaps, partly of dilatation, is a sort of counteraction to the imperfections of the valves. When there is obstructive disease, the blood is not forced with freedom through the orifice, and increased force is required to propel it with sufficient power. On the other hand, when regurgitation takes place, the same thing may be said. When there is obstruction to the passage of the blood from the auricle to the ventricle, dilatation is the morbid consequence. If there were no receptacle for the blood to regurgitate into, it would press on the affected parts, and rupture would be the consequence. The same sort of thing is found to take place, naturally, in diving animals. There is no doubt that hypertrophy is a great cause of evil in many instances, and it does not compensate for the mischief occasioned by the increased violence of the circulation. Dilatation, too, may be said to have a bad result in many instances, because it is accompanied by weakness of action. All the lesions I have been considering affect the left side of

the heart infinitely more than the right side, at least, generally speaking, and the reason for this has been variously ascribed. It has been attributed to the stimulating quality of the arterial blood. But there are several causes;—first of all, there is the more active function of the left side of the heart; this increased activity, therefore, predisposes to disease. 2ndly, there is the different structure of the left side of the heart; the left side is altogether stronger and thicker than the right; but this very strength and thickness offer a greater facility to the increase of disorder, when it is once induced in the walls. 3rdly. We must consider the more extensive relations of the left ventricle. You cannot disturb any part of the body, without the left ventricle bearing a portion of the disorder. Violent exertion, sudden chill, or any check to the circulation, all bear more on the left ventricle than on the right; and the result of this frequent exertion or interruption imposed on the left ventricle, renders it more liable to disease than the other.

The Physical Signs of Valvular Diseases.—These are highly characteristic. I have stated, that what are called murmurs, or abnormal sounds produced in the region of the heart, are most generally caused by some modification of the current passing through the orifices of the heart; and it is by these sounds mainly that we distinguish the character of the lesion and its seat. But we must observe that it is not every modification of the orifices of the heart, that will produce a murmur; it is only those that fulfil or complete the elements of sound, and give a vibrating resistance to the current as it passes. Hence you will understand, that where the obstacle in the orifice is very small, it does not interfere materially with the current of the blood, and it may give no vibratory resistance. With some pulsations, there is no murmur, but during strong pulsations there will be a murmur produced. Sometimes the aortic valves may be closely pressed together, so that the blood is forced out through a small orifice; in this case, the vibrating resistance may not be enough to produce a murmur. Again, the thin state of the blood in anæmia may produce a murmur, though rich blood may not. It may happen, if the valvular disease is considerable, that the murmur is not heard in the weak pulsations, but it will be heard when the heart beats more strongly. In the tricuspid orifice, there is frequent regurgitation, so as to produce pulsation, not only in the auricles, but in the great veins, as the jugular. This is not accompanied, in most instances, by any murmur; and the reason of this is, because the laminae of the tricuspid valve are placed flat against the direction of the current, and being rather light and yielding, they do not afford enough resistance for perfect vibration.

The murmur is then, generally speaking, a certain rule and indication of some valvular disease. But the amount and degree of murmur is far from being proportioned to the amount of the lesion. You may have a very loud murmur indeed produced by a very slight lesion; this is more particularly the case with those lesions that are called regurgitant. The loudest murmurs are what are called musical murmurs, where the vibrations produced by the current, are not only noisy but so

regular in utterance as to constitute a prolonged musical tone, the vibrations being equi-distant. The quality of the murmur is the best guide to the amount of the lesion, though even this is not a sure one. Those which are uniform, whether of the blowing or the whistling character, generally announce slighter lesions than the murmurs that are grating, or more deep-toned. This is a general rule. The musical sounds, when of a simple blowing or uniform character, are mostly caused by regurgitation through the smaller channels; on the other hand, the deep-toned murmurs mark the larger currents, and a harder kind of obstruction. Laennec, Drs. Hope, Wilson, and others, have thought the rough murmurs indicative of a rigid state of the orifices. Now the contrary is the case, for where this state exists, there is a great amount of looseness in the sound; and one of the harshest murmurs I ever heard, was in a case where there was no ossification at all. The breaking down of one of the valves caused a vibrating obstacle in the direction of the current. The intensity of the sound is not at all in proportion to the loudness, but it depends rather on the capacity of the obstacle for vibrating. There are, as I have mentioned, some obstacles which do not vibrate at all.

Natural sounds superseded by the murmur.—There is another character about the murmur, and that is the degree in which it supplants or supersedes the natural sounds, whether the first or the second. Whenever you have a murmur so intense and loud that you hear nothing at all of the first sound, you may be pretty sure that the lesion which produces it is very considerable, not merely as to the anatomical condition, but as to its effect on the constitution. On the other hand, when you have a murmur added to the natural sounds, there is a certain degree of proof that the natural actions are going on well; accordingly, when there is extreme disease of the mitral orifice, you find, towards the apex, that you can scarcely hear the first sound at all, but merely a prolonged blowing, not only obscuring by its loudness the first sound, but actually overpowering it. But if you apply the stethoscope over the right ventricle, you hear the sound. It modifies the suddenness and the character of the tension on which the first sound depends, and converts it into one which takes its character from the murmur itself. And it would appear in these cases, as if the vibrations naturally produced in the walls of the heart were converted into vibrations of the murmur—a conversion of the one into the other. We find these sounds arrested under various circumstances. If we throw a string into vibration, and while it is vibrating bring it near to another string also in vibration, and hitherto incapable of vibrating an octave, the octave sound will be very loud indeed; and you find that the second string, instead of responding a lower note, responds an octave; one vibration therefore supersedes other vibrations previously existing; and it appears that the murmur, to a great extent, not only muffles, but entirely destroys the natural sound of the heart, and converts the simple obtuse sound that naturally arises, into a prolonged blowing. Again, with regard to the second sound, the same thing is particularly observ-

ed. There is sufficient reason for this, for where the disease is considerable, you have not only the second sounds superseded, but the tension of the valves, on which the second sound depends, may be entirely destroyed. In the musical murmur I mentioned just now, the natural sound was not entirely superseded, showing that the amount of disease was limited. The patient did not die of disease of the heart, though there was a certain amount of hypertrophy of its walls; but he died of a fever.

The two chief classes of valvular disease are the *obstructive* and the *regurgitant*. The signs of the obstructive aortic being connected with the first sound, and the regurgitant aortic with the second sound: but regurgitant mitral is, in some measure, connected with the first sound. The distinction between the obstructive aortic and the regurgitant aortic is obvious. The mode in which it is distinguished, is by the manner in which the sound is propagated to the walls of the chest; the regurgitant mitral being transmitted most distinctly, and chiefly at the part corresponding with the apex and surface of the left ventricle; it is not heard so much in the upper part of the chest; whereas the sound of the obstructive aortic is above that, and is chiefly heard from the middle to the top of the sternum. Speaking of the symptoms produced by disease of the aortic valves connected with arterial excitement, there is almost always hypertrophy of the heart, and the arteries become the seat of an unusual impulse, a jerking kind of motion; and the symptoms, if the hypertrophy is considerable, are rather those of arterial excitement than of venous obstruction. On the contrary, mitral regurgitation and mitral obstruction produce especially the signs of venous obstruction in various parts of the system; in the vessels above the left auricle, and in the lungs, producing pulmonary congestion, pulmonary apoplexy, bronchial flux, sometimes hydrothorax, and bronchial congestion, with a liability to inflammation and congestion of all the other viscera, to a great degree. Thus the whole venous system is affected; the right side of the heart is dilated, and regurgitation takes place, and the veins of the neck and brain become congested. The regurgitation produces, sometimes, lethargy and stupor; and the other organs, more particularly the liver, are affected.

We find that a long continuance of this disease causes structural changes to take place in the different viscera; the lungs are more hypertrophied than usual; the liver, more especially, is enlarged, not merely under the influence of congestion, but a species of hypertrophy; and sometimes there is a transition to a state of subsequent contraction and degeneration. The same thing takes place in the kidneys; and thus diseases of other organs are superadded to the disease of the heart, and this superaddition of other diseases is really a common cause of the fatal termination of regurgitant disease. The different valvular lesions I have mentioned may be combined together; in some subjects you will have murmurs in both situations, referable to the mitral valves and the aortic orifice. The mode of distinction here, is by the loudness and the distinctness of character of the murmur in both situ-

ations. Under these circumstances, you may have the aortic murmur heard in the middle of the sternum, and transmitted, as usual, to the arteries; but yet you hear also a loud distinct murmur at the apex, as loud as at the mid-sternum.

I have already mentioned that there are some cases of aortic murmur transmitted to the apex of the heart; but the character is usually different in this and in mitral disease. The sound of the latter is shorter than in the murmur which is produced at the aortic orifice. The aortic murmurs are never so superficial. The blowing or whistling sounds are likewise different in character in these two cases; there is a deep, grating, hoarse murmur in the aorta, whereas the murmur at the apex is loud, whiffing or blowing. This distinction is very useful in our prognosis, more particularly if these murmurs supersede the natural sounds. Then, you know, in conjunction with these, the other signs of the disease may be different; and the great reason why these signs of heart-affections are sometimes so complicated, that we cannot determine the position of the murmur at any one particular spot, is, as I before stated, because the enlargement of the different parts of the heart causes great displacements and alterations of position; and the only constant relation which is preserved, is with regard to the direction of the current into the arteries, or its direction backwards through the auricles.

The general treatment of a diseased heart, in the first place, is to be directed according as excessive or defective action predominates.—There are cases in which excessive action, connected with hypertrophy, is predominant, and the action of the heart and neighboring arteries very strong. Moderate sedative and depletory measures should be here adopted. The same thing is to be said in case of inflammation: the treatment must be more or less antiphlogistic, although we have not the same means of knocking down the inflammation altogether, as we cannot with impunity reduce the system to too great an extreme in these cases. Another class is that in which the action is altogether defective, as shown by faintness, weakness in the circulation, and irregularity of the heart's action. This is generally benefited by stimulating means; but remember, there are some instances of defective action, where the heart has already got such a load that it cannot propel it, and we shall here give more relief by taking away some of the blood. This is the congestive form of the affection; and in congestive affections, as well as in increased excitement, it may be useful to use depletion to a moderate extent, and as a temporary measure; on the other hand, where there is a deficiency of blood in the system, and a tendency to anæmia is obvious, from the pallidity of the countenance, and the extreme tendency to dropsical effusions, this generally speaking, will be benefited by a treatment of a more or less stimulant character.

We must consider, likewise, the different kinds of lesions as modifying, in some degree the treatment. As a general rule, it may be stated (from which however, there are some exceptions), that diseases of the aortic orifice, connected with a considerable amount of hypertrophy,

commonly require a great amount of depletion, and an antiphlogistic treatment. I question if the same treatment should be observed, with regard to medicine and regimen, in lesions of the mitral valves also. This is the general rule; but, still, all is to be done in a gentle way, not carrying the depletory measures to an extreme. The diseases connected with the mitral orifice are more commonly attended by weakness of the system and the circulation, by which the pulmonary organs may be greatly congested: and mild tonics should be administered at the same time, or subsequently to other measures. When the structural disease is considerable, these medicines should be reserved for the periods of intermission. We may divide the exacerbations into two classes: 1^o They may take place from mere nervous excitement, mental or otherwise; attacks of violent nervous palpitation, referable to mental anxiety, or something disturbing the digestive organs. Here, palliatives, such as hydrocyanic acid and opium, with mild aperients, will often prove means of relief. There are effects produced by these exacerbations that require attention; when the heart is healthy, the effects will pass off without any remedies; but when the heart is diseased, we have not only to remove the immediate consequences of this excitement, but also the previous morbid effects; thus, if the lungs be congested, means should be adopted to act on the circulation, and keep up the action of the blood; if the liver is affected measures should be taken to act on its secretion, as doses of mercurial medicines. It is a very useful practice in all these cases, to give diuretics, combined with mercury, for a short time, after any attack of this kind. I do not know that anything better can be suggested. In combination with blue pill, henbane and squill, with a little digitalis, if the action of the heart is not very weak, may be given; two or three grains of blue pill, the same quantity of extract of henbane, one grain of quinine, one grain of squill, and half a grain of digitalis, are the best constituents for a pill, and form one of the most useful combinations that I know of, not only for removing congestion, but also the low inflammatory states that are sometimes produced.

2^o Besides these nervous cases, there are exacerbations of a sub-inflammatory character, produced by exposure to cold, over-exertion and the occurrence of rheumatic affections. Under these circumstances the chief remedies are: moderate antiphlogistic measures; generally local depletion at the region of the heart, by cupping or by leeches, followed by blisters, and mercury and opium are sometimes useful in these cases, but the pill mentioned before answers extremely well. Diuretics should be combined with these until the congestive and sub-inflammatory symptoms are removed. When the patient is extremely weak, so that we are afraid of withdrawing blood, dry cupping is often useful. This is not, however, so saving a measure as is generally supposed. I have found many physicians recommend dry cupping, under the idea that it saves the blood, but this is a great mistake. It causes extensive effusion of blood in the cellular texture, and the blood is decomposed, and is no longer useful; it is formed into a clot, and must be

absorbed again, in an altered state. The exhaustion from dry cupping is much greater than when the scarificator is used. Besides this remedy, plunging the hands in hot water rendered stimulant by mustard, or the application of a poultice is useful. If there is any thing like a rheumatic tendency, the best kind of remedies are colchicum, and iodide of potassium, as a means of acting on the secretions. When these temporary exacerbations have subsided, and the circulation is relieved, great benefit will be derived from tonics or mineral acids. The most useful is nitric acid. Gentian, too, is used with benefit. Mineral acids are serviceable where there is a disposition to dyspepsia. In cachectic states, where there is a deficiency in the quantity or quality of the blood, stronger tonics are employed, particularly iron in its various forms.

Complications of Heart Disease.—In cases of disease of the heart, we have likewise to consider the morbid conditions that arise from a defective state of the circulation. Dropsy is the chief of these conditions, and it has to be treated, generally speaking, with diuretics and purgatives. Those diuretics I have mentioned under the head dropsy, are useful; acetate of potash is serviceable in inflammatory cases, combined with digitalis or squilla, and also sweet spirits of nitre, and spirits of juniper; tincture of cantharides is also allowable; but no diuretic has so good an effect, in such cases, as the pill I mentioned before. Measures should also be adopted to relieve the congested state of the kidneys, where their secretion does not go on. Cream of tartar, &c., is useful. Elaterium is an admirable remedy for getting rid of the dropsy, and improving the action of the liver. It, however, is apt to cause great sickness, and a tendency to faintness, and, generally speaking, cream of tartar, in large doses of from half an ounce, to an ounce, taken in the morning, produces free watery stools, to a great amount. It should be continued at the same time that tonics are given. After this, it may be useful to give tincture of digitalis, with the tincture of cantharides. When this dropsy continues, it may be necessary to combine these diuretics with tonics. Dr. Abercrombie recommends a combination of squilla with sulphate of iron; but I am not so strongly impressed with its utility. Tartar emetic is very useful in cases where there is not too great weakness. Chalybeates and tonic medicines do much towards promoting the action of the excretory organs, as well as increasing the general strength of the system. The treatment of diseases of the heart is a very important subject. The chief object is to preserve a proper balance in the system; to avoid extremes; and to try to adapt the circulating powers to the existing defects, as well as to avoid all circumstances which overtask the organs of circulation. Gentle exercise, or friction, greatly promotes circulation, and it is also much benefited by the improvement of the excretory and digestive organs. As a general rule, in organic diseases of the heart, the diet should be as nourishing as the digestive organs will bear, without producing fulness or inflammation. The starving plan, in organic diseases of

the heart, is most prejudicial. I have seen many cases where this plan has been adopted, and which, with scarcely one exception, were invariably benefitted by a return to a moderate nourishing diet. The diet must be proportionate to the digestive powers. There are some few cases, it is true, in which the regimen must be abstemious. These are when inflammation is present, and exacerbations arising from inflammatory action; or else, where there is a great amount of hypertrophy of the heart, and continued increased action, &c. Under these circumstances, the diet must be extremely sparing for a time. But by far the greater number of cases of heart disease proceed from nervous irritability. One great rule, in relation to the diet of a patient affected with cardiac disease, is to take care that the quantity of food taken is not too great in bulk, and, therefore, vegetable food should be avoided as much as possible. This is one reason why a moderate animal diet, in conjunction with farinaceous food, is better than slops, or things of that kind, which distend the stomach without giving it strength. It is necessary, therefore, to avoid any large bulk of liquid. Many patients find out by experience the utility of modifying their diet, so as to make it of as dry a condition as is consistent, taking scarcely more than half a tumbler of liquid at their dinner. If the system becomes encumbered with a great quantity of liquid, mischief results. Further, it is important to avoid anything that will tax the heart, and excite it to excessive and undue action. In severe cases, this should be particularly studied, and the patient should not even be allowed to go up stairs, or ascend to any apartment not on the same floor; he should always walk on the same level. Constantly lying down, or sitting in one position, should be avoided: and walking about, now and then, so as to enliven the system, is desirable. Friction of the extremities, if the patient is too weak to move about, should be employed, two or three times a day, so as to promote the circulation. In many cases, moderate exercise is highly useful, not merely on account of promoting the circulation, but also the action of the various functions of secretion and digestion. Exercise in the open air, and on horseback, is highly desirable; gentle riding answers very well. In this way I have seen cases, that had gone on apparently to their last stage, completely recover. Mental tranquillity is an important element towards recovery.

No absolute rule can be laid down with regard to stimulants. They should be used in the smallest quantities. Malt liquors increase the action of the heart to a great degree. Many persons are in the habit of taking malt liquors, and a certain quantity in these cases is essential to their common mode of diet; so this must depend very much on the habits of the individual. Generally speaking, white wine, with a little water, or weak spirits and water, are useful to act on the kidneys.—*Medical Times.*

Case of Punctured Wound, followed by a remarkable train of Symptoms. By LUTHER TICKNOR, M. D., of Salisbury, President of the Connecticut State Medical Society, (with remarks by the Editor of the New-York Journal of Medicine.)

Mrs. A., about the middle of November, 1844, in washing some small articles of dress, pierced the end of the middle finger with the head of a threaded needle which she supposed penetrated the ball of the finger to the depth of from one third to one half inch. The first sensation was that of numbness, instantly following the infliction, extending up the arm to the axilla and front part of the shoulder. This was followed immediately by numbness of the fingers of the other hand, and next with faintness and vertigo, which brought her pretty soon to her bed. Some mitigation of these symptoms was procured by laudanum, so that I did not see her until severe pain and febrile symptoms, oppressed respiration and gastric sinking, excited some alarm for her safety, about forty-eight hours after the injury. I found her with hurried anxious breathing, very frequent obscure pulse, a moist surface, with temperature but little increased, almost constant chilliness, and what the patient call faintness. These two latter symptoms continued with very little variation five or six weeks. A diffused swelling not easily defined occupied the upper portion of the "pectoralis major muscle," extending upward to the articulation of the shoulder; certain points on this tumefaction were excessively painful and tender to the touch. These tender points changed their location from time to time, so as to encourage the hope that some improvement was going forward.

The local treatment consisted of dry cupping, epispastics, fomentations, anodyne poultices, anodyne linaments, &c., with very little apparent benefit; and yet anodyne poultices did the best. Internally, opium, in some form, and in large quantities, was indispensable throughout her treatment. Profuse perspiration, subsultus and incipient delirium, pretty early suggested the use of tonics, of which sulph. quinine was preferred and freely used with advantage. About six weeks after the injury a slight fluctuation was felt under the edge of the tendon of the pectoral muscle, within the axilla. Forty-eight hours after it was discovered, a spontaneous discharge of at least eight ounces of rather thin purulent matter took place, and continued profuse from this orifice, and one made subsequently a little lower down upon the chest, for about two weeks, when constitutional and local symptoms gave place to returning health. Immediately after the fluctuation was discovered, Mrs. A. made free with London porter, it being the only stimulus of the diffusible kind her stomach would bear, and this it bore to good purpose. Mrs. A. is now entirely well, I believe, though perhaps the shoulder droops a little from the awk-

ward position in which the arm was kept for a long time, rather than from any inbecility of the muscles. A deep depression marks the site of the abscess, showing a pretty extensive condensation or loss of cellular tissue.

Now, sir, is or is not this rather an uncommon history of a punctured wound? Nothing like it has occurred within my field of vision, but that is no proof of anomaly. Is there not some analogy observable in this case, with poisoned wounds? Will you be so good as to furnish some remarks on this case.

Remarks.—We thank our old and honored preceptor, Dr. Ticknor, for the above very interesting case, and hope he will favor our readers with still further contributions of a similar kind. Although we cannot hope to elucidate the pathology of this particular case by any remarks of our own, still we feel obliged to comply with his request by stating such suggestions as its perusal has given rise to in our own mind.

The case is one of uncommon interest, both physiologically and pathologically. We shall first notice the physiological deductions which seem to flow from this accidental wound, which, for our present purpose, we will view as one instituted for experimental purposes.

The nerve which was punctured, was undoubtedly a branch of the *median*, which is formed by the two lower cervical and the first dorsal nerves; and is the largest of the *brachial plexus*, which latter supplies two or three filaments to the *phrenic* or *internal respiratory nerve*, and sends numerous branches to the external muscles of respiration, to the pectoral and deltoid muscles, and indeed to the whole external part of the chest and neck; and to the *serratus magnus*, a large branch is sent, called by C. Bell, the *external respiratory nerve*, which is also connected by a filament with the *phrenic*.

It appears that when the wound was first inflicted, a *sensation of numbness* was felt running up the arm to the axilla and shoulder, and immediately afterwards the *same feeling was experienced in the fingers of the other hand*; as no mention is made of spasms or convulsions, it is inferred that none were manifested, except *subsultus*, which occurred at a later period of the disease.

This, so far as our reading and observation extend, is a rare phenomenon, and one well worthy of consideration. According to *Marshall Hall's* doctrine of the reflex function of nerves, which supposes that a nerve is compounded of sentient and excitator filaments, and has probably two origins, one in the cerebrum, the other in the medulla spinalis, so powerful a stimulus applied to an incident or sentient nerve, ought to have excited *contraction* instead of *pain* in other remote parts of the muscular system. How are the phenomena of this case to be reconciled with the doctrine of the reflex function, as explained by Mr. Hall?

Again, *Muller* observes, that "*the sensation produced by irritation*

of a branch of a nerve, is confined to the parts to which that branch is distributed, and generally, at least, does not affect the branches which come off from the nerve higher up, or from the same plexus." In this case, however, we find a similar sensation experienced by the corresponding nerve distributed to the opposite side of the body; and not only this, but painful sensations in the region of the axillary plexus, and the parts which it supplies with nervous influence; and also distressing sensations in the epigastric region, which would seem to indicate irritation of the celiac plexus and other portions of the ganglionic system of nerves. And yet Muller states that irritation is felt "only in the spot where the irritant is applied, and that it never reacts upon the brachial plexus, and on the other nerves which arise from it." One clear case, like the above, in contradiction of a statement like this, is as valid in physiology as a thousand. Sensation, we know, is generally transmitted from the periphery to the centre, from the surface of the body to the source of all sensation, the brain. In addition to this, we here find *sensation transmitted from the brain* to the extremities, as well as to the vital organs of the thoracic and abdominal cavities. Examples of radiated sensations, in the same limb, or region of the body, are not uncommon, as the extension of the pain of tooth-ache over the whole face, of pain in one finger to the hand, arm, and other fingers. In the London Medical Gazette for 1834, a case is related where, after amputation of the thigh, a swelling formed in the ischiatic nerve at its extremity, where it was also firmly united to the cicatrix and bone; after a short time the skin of the entire stump, and sometimes even *distant parts*, as the integuments of the abdomen, became affected with severe pain, without any inflammatory symptoms; but the trunk being amputated at a higher point, the pains did not return. Muller states that these sympathetic sensations do not occur *in health*, because of the isolation of the nervous fibres in their course to the brain; but there is no more isolation *in health* than there is in *disease*.

The following case, which we find in Mr. Swan's "*Treatise on Diseases and Injuries of the Nerves*," has many and close points of resemblance with the one reported by Dr. Ticknor. Mrs. E., aged 40, received a cut on the inside of the first phalanx of the left thumb. Immediately after the accident she felt a numbness in the arm, and a sense of fulness, as if the skin would burst; these sensations continued for a fortnight, and the wound healed very well. At the end of this time, violent pain came on, when a tremulous motion could be seen in the part which it occupied. The pain was termed startings or spasms, by the patient, and was felt in different ways, but the muscles were not affected. *These spasms were felt all over the body, though they were by far the most frequent in the upper half of it. She frequently felt a great heat in the chest and abdomen, but most particularly in the latter, and the same startings as in other parts of the body. The sensations were sometimes as if the flesh was pinched with hot irons: sometimes a great heat, as if hot water was poured*

down her back ; sometimes she had frequent shakings of the whole body, which were unattended with pain, and were most relieved by drinking hot water. The spasms were not confined to the left arm, but she had them at the same time in the right, and *frequently in the right when she had none in the left*. The fore-finger was as painful as the thumb, and if any thing touched either of them the spasms were produced, which continued many days. She had a good appetite, her bowels were confined and her tongue furred. But she had no thirst.

Sedatives and antispasmodics seemed to do her most good, though nothing was productive of much benefit. At the end of six months the spasms were less frequent, but were reproduced if the thumb or fore-finger was moved or touched. Succeeding years brought each some mitigation of her sufferings, but even after seven had elapsed, extreme susceptibility of any impression still remained in the thumb, and the fore-finger had not recovered its natural condition. Lifting a weight, or using the right arm much, always produced sensations as if needles were running into it, and attempting to use the fingers of the left hand, as in knitting, produced giddiness. She continued to be affected with spasms in every part of her body till her death, which happened nine years and six months after the occurrence of the accident, when she seemed to die worn out.

The following are examples of a similar kind. Dr. Wollaston states (Sir B. Brodie on Nervous Affections) that he ate some ice-cream after dinner, which his stomach seemed to be incapable of digesting. Sometime afterwards, when he had left the dinner table to go to the drawing room, he found himself lame *from a violent pain in one ankle*. Suddenly he became sick ; the ice-cream was rejected from the stomach, and this was followed by an instantaneous relief of the pain in the foot.

"A gentleman consulted me," says Sir Benjamin Brodie, "concerning a pain in one instep. The pain was severe, causing lameness, so that he walked with difficulty ; but there was neither swelling, nor, except the pain, any mark of inflammation. I prescribed some remedies, which, however, were of no avail. One morning he called on me, still suffering from the pain in the foot, and so lame that he could not get out of his carriage and walk into the house without the assistance of his servant. Now, however, he complained of another symptom, he had a difficulty of making his water, and a purulent discharge from the urethra. He had labored under a stricture of the urethra for many years, and had occasionally used bougies. Of late, the stricture had caused more inconvenience than usual ; but he had abstained from mentioning it, thinking it would be better that he should (if possible) be relieved of pain in the foot before any treatment was adopted on account of the stricture. Under these circumstances I introduced a bougie, which penetrated the stricture, and entered the bladder. Immediately on the bougie having been used, the pain in the foot abated ; and in less than a quarter of an hour he

left the house free from pain, and walking without the slightest difficulty! This happened some years ago, but I have seen the patient at intervals ever since; and from a most careful observation of his case, he and I are both satisfied that the pain in the foot is connected with the disease in the urethra, and we have never found any thing to relieve it except the introduction of the bougie."

The following may also, perhaps, be regarded as cases illustrating the tortuous or anomalous route sometimes pursued by sensation: as when pain is felt in the testicle, from the passage of a calculus along the ureter from the kidney into the bladder, on the same side; or pain on the outside of the hip, from inflammation of the testicle. The former may perhaps be explained, by the circumstance that many of the nerves of the testicle derive their origin from the *renal plexus*, which also supplies the kidney, and which is formed by branches of the great sympathetic nerve. Now the calculus operates, in the first instance, on the nerves of the kidney, by which its influence is transmitted to the renal plexus, and thence *reflected* to the nerves of the testicle.

In the latter case, the nerves which supply the scrotum and cord have the same origin, viz. the *lumbar plexus*, as the cutaneous nerves of the outside of the hip. The irritation of the former is thus communicated to the latter and referred to the parts to which they are distributed,—attacks of gout in the foot from the presence of acid or other irritating matters in the stomach, are also examples to prove that irritation in one part of the body may cause pain in another and remote part.

Instances are common enough where irritation at one extremity of a nerve is felt at the other, or at its origin: as when pain is experienced in the back, from injecting port wine, &c., into the *tunica vaginalis testis*, head-ache from irritating matters in the stomach (which is instantly relieved by an emetic).

Now, how are we to explain these facts from recognized physiological laws? Is an impression conveyed to the sensorium by one nerve, and transmitted by it to another nerve? Is it possible to determine, in particular cases, *why* a particular route is taken by sensation? Is it, in short, reflex action from the brain or spinal cord, at all? *Muller* has asked, whether a current, in such cases, passes from the cerebral or spinal extremity of the nerve in a retrograde course, to its peripheral extremity; or, if there is no current, but merely oscillation of a nervous principle? whether the impression conveyed to the brain by the nerve primarily excited, gives rise to a reflex oscillation in another nerve, from its cerebral to its peripheral extremity? It seems altogether improbable to us that either currents or oscillations are propagated in a retrograde direction from the brain; nor is it necessary, in explaining the phenomena in question, to suppose the existence of any such law, or mode of action; it is more rational, and certainly more philosophical, to suppose that the irritation is transmitted to the origin of the nerve, in the brain or spinal cord,

which supplies the part affected, and *there* affects the *origin* of other nerves, going to other parts, and thus giving rise to sympathetic sensations in those parts to which such nerves are distributed. As when a limb has been amputated, sensations are apparently felt in the limb that has been removed; and, in epilepsy, an *aura* is experienced in the lower extremities, although we know that the cause and true seat are not in those parts, but in the spinal marrow or brain; being, in fact, nothing more than the first symptoms of the affection of the spinal marrow and brain, which show themselves during the attack.

In affections of the spinal cord, moreover, the sensations are felt in the peripheral parts of the body, as in inflammation of the cord, we feel violent pains in the limbs. In this manner, we apprehend, are sensations sometimes radiated to different and remote parts of the body.

In the case of Mrs. A., the function of *respiration* and *circulation* was seriously affected, and that *immediately* upon the infliction of the wound. Our first inference from this fact is, the phenomena were manifestly the result of *irritation*, and not *inflammation*, as sufficient time had not elapsed for the processes of the latter to have been instituted. Hence, the opinion of some, that all phenomena that arise in consequence of injuries to the nerves are owing to inflammation, is erroneous, and should be abandoned.

The symptoms also indicate, that that portion of the spinal cord and medulla oblongata, that gives origin to, or is connected with, the par vagum, sympathetic, phrenic, and other nerves that minister to the functions of organic life, was profoundly affected; and it is a remarkable fact, that an impression of so grave a character was chiefly confined to that portion of cerebral or medullary matter that is concerned in *sensation*, and did not involve the tract concerned in *motion*. The cold and moist surface shows a suspension of capillary circulation—a function well known to depend on the integrity of the nervous power. The sensation of “faintness” may perhaps be referred to the deranged function of the nerves which constitute the *cardiac* and *solar plexus*. The sensation of “rigor,” or constant chilliness, is an attendant upon local irritation, under a great variety of forms—expressive of a sympathy of the circulating with the sensorial organ—of the heart with the brain. It may arise from *fear*, from *cold*, from *suppurative action*, from a *direct nervous impression*, as *syncope*, from the *prostrative character of severe irritation*, as a severe shock or blow; and in general, perhaps, it indicates returning animation and reaction. Another remarkable feature in this case, was the *formation of an extensive abscess* beneath the pectoral muscle. When we take into consideration the state of the system at the time, the low state of the circulation, and the imperfect manner in which all the vital functions were performed, we are certainly forced to the conclusion, that suppurative inflammation does not, at least, always indicate a high grade of arterial action, and that it may be sometimes combatted most successfully by anodynes and tonics—remedies to

allay irritation and support the integrity of the vital powers. The effect of the remedies will, also, clearly lead to the same conclusion. May we not hence derive a useful lesson? and, when we meet with local inflammation, with deteriorated condition of the general health, and symptoms of irritation present, in one or more organs, whether it be the brain, the stomach, or the urinary apparatus, instead of general or local bleeding, resort, with advantage, to a cordial, supporting plan of treatment?

Mr. *Travers*, in his excellent work on "Constitutional Irritation," has pointed out with great clearness, the distinguishing marks between inflammation and irritation, which the reader may profitably consult in connection with this subject. This case proves very conclusively that if much may be said as to the "constitutional origin of local diseases," much may also be advanced upon the local origin of constitutional diseases.

Dr. T. has inquired whether there is not some analogy in this case with *poisoned wounds*? So much so, we would say, that had the same symptoms occurred from a dissecting wound, few would have doubted that they were occasioned by the absorption of morbid matter. Mr. *Lawrence* thinks it very doubtful, whether "any thing that can be called virulent or poisonous, is introduced into the human frame by dissecting wounds," but imputes the effects to the mechanical injury inflicted. Such cases as the above would seem to lend considerable support to such an opinion. The instantaneous occurrence, however, of some of the gravest symptoms, may serve to distinguish such a case from one where poison has been absorbed, as, in the latter instance, some time would be required for the development of the disease. It depends, we believe, entirely on the state of the general health at the time, whether such accidents ever lead to any serious result; certainly in a very large majority of cases, no unpleasant symptoms whatever follow such wounds. During our apprenticeship in our younger years, as demonstrator of anatomy, we often met with these accidents in dissecting, but never experienced the slightest injurious effects, although we used little, if any precaution. In some instances, we believe the effects produced are such as would arise in wounds considered in themselves, without any reference to the absorption of morbid matter; in other cases it is more probable that a poison is introduced into the system, to which the subsequent phenomena are to be attributed. We here close our discourse, with many thanks to our friend who has furnished us with our text.

On the employment of Vesicatories in the treatment of Sciatic Neuralgia, according to the method of Cotugno. By I. GARIN, translated from the Bulletin Général de Thérapeutique.

The facts which I am about to relate are not very important either for their rarity, or for the obscurity of the diagnosis, or for the deductions which might be drawn from a greater number of cases.

Sciatic neuralgia is an affection which if not always well determined as to its nature and the kind of lesion which causes it, is at least generally well known by its symptoms; and the rare cases in which it may be confounded with incipient coxalgia, or with neuritis, are the only ones in which the diagnosis presents some difficulty.

It is especially with regard to its treatment that this affection has arrested the attention of practitioners, and they have exhausted means of every kind in their attempts to remedy the cruel pains, of which it is the prolific source. Thus the number and the variety of the means employed, prove the great difficulty and uncertainty of the treatment, and are at the same time but little calculated to encourage new researches. In a therapeutic view, however, the following facts may possess some interest. Without extending the already long page of the treatment of sciatica, they will disclose the peculiar employment of a known remedy, and they will shew that there is a proper mode of employing topical applications, as well as of administering medicine internally, and that both fail, unless upon certain conditions, which ought to be well appreciated.

CASE 1. A carpenter, aged 37, sent for me April 7th, 1844. He was of a strong constitution, and of a sanguine temperament, had lived at Lyons for ten years, and had never been sick—eight days before, while working in a shop exposed to currents of air, he experienced in the left thigh, a sensation of pricking, and of numbness, which attracted but little attention. During the night the pain became more severe, and the next day, and the two following days, it began to embarrass his movements, and although it seemed to be less acute during action, than when in a state of repose, the patient discontinued his work, believing that tranquility would be sufficient to restore the use of his limb. In this he was disappointed, as the pain became more and more developed. It occupied the posterior

part of the thigh, from the gluteal region, to the popliteal hollow, without extending below the knee. For two days, the patient employed frictions with camphorated oil, without any relief. On the fourth day, he applied a blister upon the thigh. The pain, instead of diminishing, increased, and extended below the knee, along the external margin of the leg to the external malleolus and the instep, following the course of the external popliteal nerve. The limb became very sensitive upon the slightest motion, so that the patient was obliged to send for a physician. I was called.

On the 8th of April, the ninth day of the disease, the pain was very acute—the patient had not slept, the face was red, the head of a burning heat, no appetite, intense thirst, the tongue white and the pulse hard and frequent.

Prescription.—Bleeding of about sixteen ounces; barley ptisan; gum syrup, with one grain of the watery extract of opium. Diet.

On the 9th, the patient having slept a part of the night, was free from cephalalgia, and asked permission to eat. He continued to complain however of pain, which was fixed—continuous, sometimes of a crawling, sometimes of a lancinating character, and which was occasionally aggravated; two cramps had occurred during the night—the leg was flexed, and motion impressed upon it caused acute pain. The latter extended from the hip to the foot where it was especially acute, and also in the gluteal region, but less severe at any intervening point. There was no redness, heat, or swelling, along the course of the nerve, but pressure at certain points increased the suffering.

The signs of acute sciatica being indubitable, I resolved to employ immediately the method of treatment by multiple vesicatories, which I had seen in Paris to be successful in the practice of M. Gendrin, and which had appeared to me to be most expeditious. I applied immediately three blisters, the first opposite to, and a little behind the trochanter major, the second upon the external side of the tibio-femoral articulation, opposite the superior extremity of the fibula, and the last upon the inferior extremity of that bone, so as to cover the malleolus externus, and the superior and external part of the dorsal face of the foot. These blisters were applied simultaneously, and were of the following dimensions: the first, six inches in diameter, the second, four inches, and the third, five inches, as I had seen practised by the physician of the Hôpital de la Pitié. In addition, the same potion and ptisan were renewed, and soup allowed.

April 10th. The patient has had fever ; he has not slept ; but the sciatic pain is obscured by that of the blisters. Same prescription.

The 11th. The sciatic pain is less violent in the thigh, but very acute in the foot. The blisters removed on the previous evening, after an application of 24 hours, had produced a circumjacent erythema, upon which were placed compresses smeared with an opiate cerate. Semi-regimen ; the same ptisan ; the opiate potion is suppressed.

Three days afterwards, (the 14th,) the blisters have ceased to be painful, the neuralgia is much less severe, and the patient complains only of a very uncomfortable sensation of numbness. Same prescription. The blisters shewing a tendency to dry up, are excited by an epispastic pomatum of cantharides.

The 17th. The patient, who had been previously unable to place his foot upon the ground, got up without any increase of pain ; but the limb is weak, and scarcely able to support the weight of the body. From this time, I did not see him until the 23rd, when I learned from him that he could walk without difficulty, and without pain. I advised him to make dry frictions upon the extremity, every morning and evening, and to resume his ordinary occupation.

This is a case of acute sciatica, which presents nothing peculiar, except its rapid termination. The duration was about twenty days, and the cure was accomplished by the employment of blisters in the course of twelve days. The following case of chronic sciatica presents the same success.

CASE 2. A plasterer, about 44 years of age, had been affected with sciatic neuralgia of the right extremity for two years, for which he had been treated from the beginning, at the Hotel Dieu of Lyons, by oily and aromatic frictions, by vapour baths, and sudorific drinks, whose nature he could not specify. This pain was very acute for a month, and ceased gradually during summer.

September 18th, 1844, he came to me with a new sciatic pain of the same extremity. The pain presented the peculiarity of having commenced at the foot, thence extending progressively along the fibular margin of the leg, without ascending above the knee. The general health of the patient is not good, his constitution is feeble, he is emaciated and pale. The pain of the leg is deep-seated, dull, and seems according to the expression of the patient, to occupy the marrow of the bones. Pressure along the course of the external popliteal nerve increases the pain, and transmits it to the hip, the

same result is not obtained by compressing the sciatic nerve near its origin.

Prescription—Two blisters, one upon the malleolus externus, the other upon the head of the fibula, with the respective dimensions indicated in the preceding case.

On the following day, the pain which had been fixed in the leg was experienced in the thigh, and in the gluteal and lumbar regions; the patient has not slept, the pain having kept him constantly awake, and it was with great difficulty that I could persuade him to permit the application of another blister of six inches in diameter on the gluteal region.

Prescription—Two pills with half a grain of opium; ptisan of the flowers of the orange tree; soup.

Sept. 20th. The patient suffers lancinating and lacerating pains in the thigh, which upon pressure or motion, are increased and propagated to the gluteal region and to the scrotum. He has slept but little, the suffering is greater during the night than in the day. The prescription is continued; the regimen is slightly increased.

The 22d. The pain has diminished; pressure not so painful, but every movement renews the suffering.

The 25th. The blistered surfaces are revived by a cantharides pomatum.

The 27th. The neuralgia has nearly disappeared; the patient can perform the movements of flexion and extension, without pain, but is still unable to walk or to get from bed.

The 30th. Pain is no longer experienced; the patient can turn in his bed, and begins to walk about in his room. Six days afterwards, he resumed his occupation, which has not been interrupted up to the present time. This was a case of sciatica, in which pressure disclosed with precision the extent of the phlegmasia. It extended upward along the course of the external popliteal nerve, as high as a point at which pressure ceased to be painful. We may here also observe the same fact which may be remarked in the preceding case, viz., the exacerbation of the pain, and its extension to the entire nerve immediately after the application of the blisters. This is a phenomenon which I have constantly observed, and which is explained by the vivid irritation caused by vesicatories applied to a large portion of the cutaneous surface.

CASE 3. The employment of multiple vesicatories is not only very advantageous in cases of simple sciatica, as in those which I have

just reported, and which are the most common, but these powerful derivatives may also be very successfully used in chronic lumbago, which is sometimes accompanied by a double sciatica, as the following example proves:

One of my friends, aged 42 years, of a good constitution, and of a nervous temperament, has been subject from his infancy to headache of the most violent kind, and very frequently repeated. It is the only affection with which he has been troubled, except the one about to be described.

For about fifteen years, he has experienced almost constant pains in the lumbar region, which he attributed to the accidents of the chase, for which he had a great passion in his youth. He has successively employed every variety of treatment, shower baths, vapor baths, sand baths, sea bathing. He has visited Aix, Cette, Balaruc; but nothing had been successful. The pain seemed on the contrary to have increased, and from the lumbar region, it had extended to the thighs, to the legs, and even to the plantar surface of the feet, which were particularly painful, so as sometimes to prevent walking or even standing.

I had frequently advised, but not very urgently, the employment of blisters on a large scale, being doubtful whether they would prevail against an affection of so old a date, and which I regarded with other physicians as an inflammation of the medulla spinalis. Tired of the means which had been previously employed without success, he determined in the month of September last, to try this last chance. I will not enter into the details of a treatment which continued for a month, and during which the patient remained constantly in his bed, or in his room. I will only state that at three different times blisters were applied upon all the joints of the inferior extremities, and upon both sides at once, and also that four different applications were made upon the lumbar regions. All these blisters had the dimensions which I have already indicated, and those upon the loins were even seven inches in length and eight in width; so that it might be said that the body was but one vast wound, judging at least by the enormous quantity of linen which was daily stained by the suppuration, by the excessive pains of the patient, and by the rigorous immobility to which he was condemned. From this extensive vesication, I had no accidents to combat, either with respect to the urinary bladder, or the genital organs, or the head; ptisans of barley and flaxseed, emollient injections, and some opiate potions, were the only internal remedies employed during the treatment.

Six months have elapsed since this treatment was adopted, and ever since the patient has remained in the possession of good health; the loins and the inferior extremities have regained their strength, and are competent for ordinary exercise. Long continued walking, however, or tolerably great fatigue, causes weakness, without re-exciting the pain.

I could take from my old notes of the clinic of M. Gendrin, many facts in support of the treatment which I have just detailed, but they would add nothing to the single inference which I wish to draw from the preceding cases, viz., that blisters in the conditions which I have indicated, having been successful in the cases just reported, and in a great number of analogous cases, we should hasten to employ a method which is so easy, and is preferable to others that have been more vaunted; such as the employment of morphine, incision along the course of the sciatic nerve, and the application at the bottom of the wound of a belladonna pill, a treatment which is imprudent and which I have seen to fail, and finally the worst method of all, the section of the sciatic nerve, advised in extreme cases by Galen, and practised without success by Mareschal, Louis, Sabatier, and more recently in 1828, by M. Malagodi, who is mentioned by Velpeau in his *Operative Surgery*.

If vesication, employed in the particular case which now occupies our attention, has been sometimes unsuccessful, these failures must be attributed rather to the mode of application than to the inertness of the remedy. Thus to speak only of the ordinary blisters of cantharides, they are employed most frequently singly, and of the dimensions of two or three inches, and applied only over the great trochanter. Some go so far as to renew them from time to time, in order to obtain a constant suppuration, but many abandon the essay after the first application. This mode of vesication has most frequently failed, for two reasons; first, because it is too limited to act efficaciously upon the affected nerve which is situated deeply in a case of sciatica; and secondly, because neuralgia, though sometimes limited, is most commonly extended along the whole nervous trunk, and it is not sufficient to act upon the nerve only at its origin, but it is necessary also to operate upon it throughout its entire course to its termination.

That this explanation of the insufficiency of a single small blister, is true, cannot be doubted; observation and experience testify this insufficiency to be almost constant when the neuralgia is of some

extent and importance. This was perceived by M. Velpeau, when he employed blisters in strips along the entire course of the sciatic nerve, and of the external popliteal nerve. I know not if these strips were too narrow, or if the suppuration was not maintained sufficiently long, but it seems that this plan was unsuccessful, since it has been renounced by its author.

The method of vesication which I have employed, after the example of M. Gendrin, is not new; but the physician just cited has added some modifications to it. It is the method of Cotugno, and is also recommended by Hufeland, in his *Manual of Practical Medicine*, with this single difference, that the Italian physician and the physician of the Prussian king, gave to their blisters equal dimensions, and applied them only at intervals of one day, fearing doubtless to produce erysipelas, and a too vivid irritation of the cutaneous surface. But we know that if blisters have been able to fix erratic erysipelas, they rarely determine its production. As to myself, I have never seen the least inconvenience result from their multiple application. I conclude, then, that monstrous blisters, if they may be so called, though still larger are employed, are :

1st. The best mode of treatment for sciatica, whether dependent upon an inflammatory or upon a rheumatismal cause, experience having shewn that they succeed in both cases.

2d. That these blisters having the dimensions above stated, ought to be applied upon the three articulations of the inferior extremity, with this exception, that we apply only two when the sciatica is confined to the thigh or to the leg, but the third one is to be applied, if, as sometimes happens, the neuralgia invades the entire limb after the first application.

3d. That these blisters do not have the danger of the employment of morphine, whose effects cannot be calculated in the endermic method, because of the difference of its action upon different subjects. I heard, during my residence at the Hotel Dieu, that a patient had died with symptoms of poisoning, after the application of one grain of acetate of morphine, upon a denuded surface. While in the service of one of the divisions of the Ward Quatre Rangs, I saw a patient experience poisonous effects from the employment of half a grain of the hydro-chlorate of morphine, and nevertheless, authors council us to trust to the absorption of even two grains. Finally, as far as inconveniences are concerned, these monstrous blisters cannot be compared with the section of the sciatic

nerve, which in the case cited by M. Velpeau, was followed by a very slow cicatrization, after the expiration of one year, and by debility of the limb which remained in a state of semi-paralysis.

4th. My fourth and last conclusion is, that blisters of large dimensions have not produced erysipelas, or other accidents, and that vesication, whose employment has been so frequently modified, and which has been regarded alternately as an inoffensive remedy, and as an heroic remedy, ought to be much used in sciatica, not with the view of endermic medication, but as an evacuant and a derivative.

N.

Considerations upon Ataxic Pneumonia with Delirium and its treatment by Musk—contained in a letter from THIBEAUD, Professor of Clinical Medicine at Nantes, to the Editor of the Bulletin de Thérapeutique. (Translated.)

I have just read in the January number of the Bulletin de Thérapeutique, a case of peripneumony, accompanied with delirium during its course, and which terminated fatally on the eighth day. The disease had existed for five days before the patient was admitted into the hospital, when he was affected with so violent a delirium that he was unable to give any account of his condition. Pneumonia of the right side having been recognized, several venesections were prescribed without obtaining any amendment. Death occurred on the third day after the admission of the patient—the delirium persisted to the last, and so also did the signs of pneumonia; the pulse presented but a moderate degree of development.

To this case were appended the following reflections:

“The delirium, rather than the pneumonia, should have been the source of indications after the failure of the venesections, and we believe, after an attentive examination of the different elements which this case presents, that the use of musk would most probably have subverted the delirium which embarrassed the progress of the disease,” &c.

It is with the view, Mr. Editor, of corroborating your opinion, and of insisting upon a therapeutic point of great interest, that I take the liberty of addressing you this letter.

Most certainly there are cases of peripneumonia in which the pul-

monary inflammation, if we may so speak, occupies only the second rank, and is eclipsed in importance by a superior element—the *nervous element*. Indeed the doctrine of *elements* developed by the physicians of the school of Montpellier is here eminently applicable. Delirium, the form assumed in these cases by the nervous phenomena, occurs under a peculiar aspect, and has been well appreciated by M. Recamier, Trousseau and Pidoux. In the majority of cases, it is violent, accompanied by incoherent vociferations, and by unreasonable acts. The features bear the impress of affright, or of intense pre-occupation, the patient has not an instant of repose—sleep abandons him, and the room in which he is placed is disturbed by his threats and his cries—most commonly it is necessary to confine him in a straight-jacket. During this time the pulse is small, weak, frequent, and sometimes irregular. The general and local signs of the pulmonary affection undergo but little change; auscultation announces generally a stationary condition. It is not then in the extension or in the increased intensity of the phlegmasia that the danger resides. In such cases you have said, as has been also established by Sarcone, Recamier, and others, that musk produces *marvellous effects*. This is no exaggeration,—this medicine becomes under such circumstances *truly heroic*. If the diagnosis be exact, if we have not mistaken for this *ataxic delirium*, which I have just endeavored to describe, a sub-delirium without any particular character which occurs about the termination of certain cases of pneumonia, or indeed the delirium which, combined with other characteristic symptoms, announces the existence of cerebral meningitis, we are almost certain to triumph over the threatening symptoms which make their appearance. I am at the present time so well convinced of what I have just advanced, that in my clinic I have frequently predicted to my pupils the immediate and ulterior effects which were to follow the administration of the musk. Indeed after a dose somewhat large of this medicine, one scruple or more has been administered, the agitation is diminished, the delirium is appeased, the superior eye-lids become heavy, yawning and pandiculation occur, the patient seems under the influence of an imperative desire to sleep, and which he endeavors in vain to resist. This sleep soon supervenes, and is protracted for several hours, and during this time the pulse becomes slower and increases in force, a general perspiration breaks out, and when he awakes the patient is restored to consciousness. If the delirium returns it is only at intervals, and at length entirely disap-

pers. But although he has recovered his consciousness, the patient remains sometimes in a state of numbness which continues for several days. The senses are obtuse; audition, vision, and touch give but confused perceptions, and the answers, although correct, resemble those sometimes made by persons at the moment of being aroused from slumber. However the local symptoms of the peripneumonia, which until this time had remained stationary, change immediately. The resolution of the phlegmasia which had been suspended by the disturbance of the economy resumes its progress, and auscultation proves that the pulmonary parenchyma is becoming pervious to the air.

Ataxic pneumonia is not very common, and hence probably the astonishment which it causes in some practitioners, and the errors of diagnosis committed by even eminent men. The opportunities of giving musk as a specific medicine do not occur as frequently as is supposed. Here I speak only of those cases in which this substance produces evident effects, and which the most sceptical cannot deny. At the present moment I leave out of the question certain acute, and particularly numerous chronic affections in which musk has been recommended. In such cases, new researches are necessary, and it is perfectly legitimate to doubt. Thus, musk is one of those remedies which is employed by one practitioner or disdained by another, according to their different opinions or the nature of their studies; but this is not the case in the disease which we are now considering. I said that ataxic peripneumonia did not appear to me to be very common, thus in a service of more than forty beds, where the admission of patients is pretty frequent, I have not observed more than one or two cases of this kind each year; and even sometimes a greater interval elapses before such cases are received in my service. I give musk therefore but rarely, and only under the above-mentioned circumstances, being doubtful of its good effects in many other morbid affections.

I will also add that, during the progress of *pneumonia, with delirium*, complications sometimes supervene and oppose an invincible obstacle to the good effects of the musk. Two such cases, which I cannot now report with all their details, and which were observed in my clinic in 1841 and 1844, were especially very remarkable. Independently of the hepatisation of the lung, as demonstrated by autopsy, there existed in both traces of acute pericarditis, and in one of them traces of cerebral meningitis. In both these patients the delirium which occurred during the course of the peripneumonia

presented the characters above indicated, and yielded completely to musk, which was given in a large dose. It was only secondarily that a new phase presented itself, and that symptoms of another nature occurred and occasioned the death of the patients. In one of these cases, the pericarditis was not recognised; in the other, a remarkable agony, and a great intermittence of the pulse, were the only signs which induced us to suspect its existence.

These cases, however, are of a particular kind, and cannot invalidate others now recorded in the annals of our science. Cases of the latter kind are now well known, and their number increases daily. In 1839, in the 7th volume of the *Journal des Connaissances, Médico-Chirurgicales*, we published ourselves such a case. The peripneumony had occurred under the influence of a cold temperature acting during the night upon a young soldier while on duty. It had reached the ninth day without any appreciable change; the most energetic treatment had been adopted; eight venesections had been successively practised, thirty leeches had been applied upon the thorax, and subsequently two blisters; kermes mineral also had been administered. After several apparent and temporary ameliorations, a violent delirium suddenly seized the patient, the pulse became small, feeble, and frequent, (115 per minute,) respiration frequent, (40 per minute,) the local signs of pneumonia persisted, the countenance was greatly altered, the features cramped, and the delirium so great that it was necessary to tie the patient to prevent his escaping from bed. In this state of things, musk was administered in pills in the dose of one grain per hour. Eight grains had been given, and already the delirium was sensibly diminished, and the pulse had lost its frequency. The following night, during which the musk was continued, a calm sleep supervened. The second day, after the administration of one scruple of the medicine, convalescence commenced, and during this time the signs furnished by auscultation, announced a free solution of the pneumonia.

On 13th May, 1844, M. Botte, a pupil of the Hotel Dieu of Nantes, selected ataxic pneumonia as the subject of his inaugural thesis. In the course of his researches, he reports several cases collected in the different services of the hospital, and particularly in the clinical wards. Two of these cases seem to me well calculated to demonstrate the incontestible efficacy of musk, and were prepared under my direction.

A patient was admitted into the Hotel Dieu on the fifth day, of a

peripneumonia, for which two venesections and an application of leeches had been made. On the third day he was taken with a violent delirium, which rendered it necessary to tie him, and in that condition he was brought to the hospital. During the day, after a third bleeding and the administration of a bottle of Sedlitz water, the symptoms were aggravated to the highest point, the eyes became brilliant, the expression of the countenance threatening, and the straight-jacket was used to prevent the patient from escaping from bed. His strength declined, tongue and lips parched, pulse frequent, concentrated, and depressible, the bladder distended with urine, and requiring the introduction of the catheter. During all this time, auscultation discloses posteriorly, and upon the left side a crepitant rale, a bronchéal souffle, and bronchophony; the expectoration of a peripneumonic character. In the midst of this frightful array of symptoms, musk was prescribed in a large dose, and in thirty hours (counting from its administration) yawning and pandiculation took place, followed soon by a quiet sleep, with a gentle moisture of the skin, announcing the beginning of improvement. On the next day some vestiges of delirium still persist, but soon disappear entirely. The pulse loses its frequency, the signs of resolution are manifested, and five days afterwards the convalescence is confirmed.

Another patient was admitted into the hospital on the seventh day, of a peripneumonia, after having been bled three times, and after the application of fifteen leeches upon the affected side. The stethoscopic signs of pneumonia were recognised, and two additional venesections were practised the day after his admission. On the following day, delirium suddenly supervened, and attended for some moments by a kind of cataleptiform stupor. Consciousness is entirely lost—the eyes immovable, seemed fixed upon any object before the patient. The pupils are contracted; deglutition difficult; pulse very frequent (124 per minute) and very depressible. At the moment of the visit, this condition suddenly gave way to a violent paroxysm of delirium, with a disposition to escape and to seize upon the persons who approached him. After the administration of one scruple of musk, the delirium is replaced by a kind of profound torpidity, the pulse is pliant, of moderate consistence and less frequent (92 per minute.) A chill, without any known cause, supervenes during the day, and is followed by a return of the delirium. One scruple of musk is again prescribed, and after a calm night and refreshing sleep, the intellect becomes clear, signs of the resolution

of the phlegmasia are manifested, the appetite returns, and the patient is convalescent.

Thus in certain cases of pneumonia, there may occur new morbid elements of such a nature as to arrest the resolution of the phlegmasia and to threaten life. In such circumstances, appropriate remedies ought to be substituted for the ordinary treatment. Ataxic, or delirious pneumonia, furnishes an instance of this kind, and in the same way, that in pernicious fevers, although attended with phlegmasia, *the sulphate of quinine* constitutes the fundamental plan of medication; because a special element here predominates over the entire affection; so in like manner, *musk* is the heroic medicine to which we should promptly have recourse in ataxic pneumonia accompanied with delirium. Physicians have been so much fascinated by the doctrines of exclusive organicism, that they can hardly comprehend how very intense cerebral symptoms (such as those which we have indicated in this article,) can exist without meningitis, and how consequently any other than an antiphlogistic treatment can succeed in such cases. The same thing is true in many other diseases. But nevertheless, the accomplished physician, enriched by the knowledge of modern discoveries, tends each day to resume the route which has been too much abandoned, and to study morbid affections by means of *clinical observation, in preference to any thing else*, and not exclusively by the light of *Pathological Anatomy*. N.

PART III.—MONTHLY PERISCOPE.

Venous Pulse.—M. Martin Solon read a paper on the Nature and Causes of the Venous Pulse, which occasioned several animated and interesting discussions. The term venous pulse is generally applied to the pulsations which are observed in the jugular and subclavian veins, in cases of great repletion of the cavities of the heart, or of insufficiency of the tricuspid valves. The latter not closing when the ventricles contract, the blood is expelled, as it were, into a third artery, and venous pulsations ensue, more or less synchronous with the arterial pulsations. M. Martin Solon, having lately observed pulsations in the dorsal veins of the hands in two instances, in which it appeared to him that the pulsations were evidently transmitted through the capillaries, wished to draw the attention of the Academy to this phenomenon. The patients on whom he observed the venous

pulsations were both attacked with violent pleuro-pneumonia, had been bled several times, and had taken tartar emetic in large doses. The veins were prominent, rounded, of a bluish-rose colour, and presented a diastolic and systolic motion, easily appreciable by the eye, and synchronous with the pulse. On a careful examination being made, it was evident that this motion was not communicated by any adjacent vessels. When the fingers were pressed, the pulsations ceased, but when the wrists were pressed, they remained as before. When the brachial artery was pressed, the pulsations of the radial and cubital arteries, and of the dorsal veins of the hands, all disappeared together. In both cases the patients gradually recovered. In one, the venous pulsation appeared on the fifteenth day, and remained seven days, the cardiac impulsion being strong; in the other, the impulsion of the heart was weak, and the symptom was not of so long a duration. M. Martin Solon thought that the abnormal fluidity of the blood in these patients facilitated the passage of the blood through the capillaries, and thus enabled it to retain the impulsion communicated by the heart. The same phenomenon, he stated, had been observed by Dr. Ward, on a woman recently delivered, and attacked with pneumonia, and by Dr. Graves, on a woman labouring under peritonitis. In both instances the patients had been bled largely. This symptom was of great importance in a pathological point of view, as it indicated a state of fluidity of the blood which might render further bleeding inadvisable; he consequently thought that the attention of practitioners should be directed to its existence. In a physiological point of view, the fact of the arterial systole and diastole being thus communicated to the veins, was of great importance, as it proved that the entire circulation is under the influence of the heart.

M. Cruveilhier stated that he had several times observed venous pulsation in the veins of the bend of the arm, but never in the dorsal veins of the hand. He thought it most probable that such pulsations were the result of a shock conveyed to the venous column by the neighbouring arteries.

M. Velpeau had seen venous pulsation in all the superficial veins of the thoracic limbs, but attributed it to a kind of reflux, such as is frequently observed in the jugular veins.

M. Blandin admitted fully the explanation of M. Martin Solon. Harvey had stated that, in some cases, the heart was able to transmit pulsations to the veins, and the experiments of M. Magendie, which he himself had successfully repeated, showed that this was really the case. If, on the dead subject, a part of the circulatory system having been previously cleared by an injection, fluid is injected into an arterial trunk by successive jerks, it passes out in a jerk from an opening made in a corresponding vein. If an interrupted flow of blood from a vein can be produced in a dead subject through the capillaries, why should not the same phenomenon be possible in the living?

M. Dubois d'Amiens remarked, that when the circulation is exam-

ined with the microscope, it proceeds by jerks, until the blood reaches the capillaries, when its flow becomes uniform; it was, therefore, scarcely possible to admit the interpretation which M. Martin Solon had given.

M. Martin Solon replied, that he did not reason from experiments, but from pathological facts. He had been careful not to be misled by the proximity of arterial branches, and by the communication of their shocks to the veins. If the pulsation had depended on reflux from above, pressure above the veins ought to have arrested them, which it did not. The valves of the veins would prevent the jugular reflux from propagating itself far.

M. Poiseuille stated, that researches which he had recently made with reference to this subject, would enable him to throw some light on the question. When the capillary circulation of reptiles and mammiferous animals is examined with the microscope, its flow appears perfectly uniform; but this is not really the case; for although continuous, it is insensibly interrupted, jerked (*saccadé*), as is proved by the following experiment:—If a curved tube, containing a solution of subcarbonate of soda, to prevent the coagulation of the blood, is adapted to one of the veins of a thoracic or pelvic limb, so as for the opening to be turned towards its extremity, the blood enters the tube continuously, but not uniformly. The flow is *interrupted-continuous*, (*continu-saccadé*), which would not be the case if the flow of blood in the capillaries was uniform. This experiment is the same on the living as the one described by M. Blandin on the dead subject, and the result is also the same. Careful examination of the jet of blood in ordinary ~~venous~~ section, equally demonstrates the truth of this fact. The amplitude of the jet is never identically the same, even when the openings of the skin and of the vein remain perfectly parallel, and the arm and its muscles are perfectly inactive. That this is the case may be perceived by observing attentively the spot where the blood falls; it will be seen to recede or approximate alternately. It is scarcely necessary to add that the greatest amplitude of the jet coincides with a contraction of the heart, or with an expiration, which increases the impulsive force of the arterial flow, and that the smallest amplitude coincides with the diastole of the heart, or an inspiration. If this normal state is exaggerated, it may give rise to the venous pulse, or uneven flow, which is sometimes observed in bleeding, and which is usually attributed to the communication of arterial shocks. In the mesenteric circulation of young rats and mice, no intermittence is at first visible; but if blood is lost in any quantity, the circulation becomes jerked (*saccadé*) both in the capillaries and in the veins. The heart losing its energy, a smaller quantity of blood is thrown into the arteries, which being less dilated, contract with less force, and thus lose their power of converting the intermittent flow into a continued one, as is normally the case. This accounted for the venous pulse having been observed by M. Martin Solon, Dr. Graves, and Dr. Ward, on patients who had lost much

blood. M. Martin Solon attributed the phenomenon to the greater fluidity of the blood. But his own experiments, as well as those of M. Magendie, proved that the more aqueous the blood became, the greater was the difficulty with which it passed through the capillaries, owing to imbibition. He thought it, therefore, more correct to explain the influence which loss of blood evidently had in producing venous pulsation, as he had done.

M. Piorry had seen jerks occur in bleeding patients who presented obstructions in the right heart, when a pound or a pound and a half of blood had been withdrawn. At the same time the blood became red instead of black, showing that the action of the heart had become, momentarily, stronger.—*Lancet*

On the Periodic Discharge of Ova, and the Function of Menstruation.—The following propositions embody the most important conclusions that have been formed by the best authorities on this highly curious subject :

1. Menstruation commences at the period of the *maturity* of the ovules.
2. The final cessation of the catamenial secretion coincides with the abolition of the formative function of the germs.
3. The ovaries of women, who have ceased to menstruate, never contain the appearance of any vesicles that have recently burst, or that are about to do so (Negrier.)
4. At each menstrual period, the highly excited state of the ovaries induces in the female a decided propensity to coition.
5. The aptitude for fecundation is greatest on those days that immediately precede the menstrual discharge.
6. In all the lower animals, the ovaria become tumid during the season of rutting.
7. Women, in whom there is a congenital absence of the ovaria, never truly menstruate, however perfect may be the structure of the uterus and other parts of the generative system.
8. The extirpation of these organs puts a complete stop to menstruation, in cases where this function had been already established.
9. Women, in whom there is a congenital absence of the uterus, but in whom the ovaria are normally developed, experience every month all the phenomena of menstruation, the sanguineous discharge alone excepted.
10. The catamenial secretion ceases completely in women, in whom the ovaria have become affected with organic degeneration.
11. It has been asserted by some writers that lascivious girls have—in this respect like the common hen—occasionally discharged ova from the vagina, and that a mere voluptuous thought will suffice *pour ébranler* these minute vesicles.
12. In very many women, the menstrual period is preceded by severe colicky pains, attributable most likely to the turgid and excited state of the ovaries.
13. In those who suffer much at these periods, the cavity of the uterus sometimes becomes lined with a soft flocky membrane—a genuine *membrana caduca*—the formation of which is entirely independent of coition.
14. Lastly, in that singular case of monstrosi-

ty—in which the two girls, Helen and Judith, were united to each other by the posterior and lower parts of the back—the catamenial discharge took place in different quantities and at different times from each subject, although there was a complete anastomosis between the abdominal vessels of the two.—*Memoire pour servir à l'étude des Maladies des Ovaires, par Achille Chereau.* Paris, 1844. *Medico-Chirurgical Review.*

Epidemic of Erysipelas, in the Hospitals of Paris. Bulletin de Therapeutique, April, 1845.—The surgeons of the Parisian hospitals have had frequent opportunities of observing epidemics of erysipelas. At this moment, one of these epidemics prevails in several of the hospitals of Paris. At the Hopital de la Pitié, the service of M. Lisfranc is crowded with erysipelatous patients; in 198 patients, 25 are attacked with erysipelas, occurring in the hospital and following operations which had been performed upon them. M. Lisfranc has never seen an epidemic more general and more intense. Six women, from whom he had removed the mammæ were all of them seized with erysipelas, and with the bad consequences which thence ensue. A simple ligation of hæmorrhoids produced in a patient a very serious erysipelas, which extended gradually over the whole back, and even to the nape of the neck. This patient is in danger. The disease has also been developed in patients who entered the hospital in consequence of accidents from vehicles, falls, &c. A simple application of leeches, the smallest operation, the slightest incision, are sufficient to excite the disease. Some of the cases are very serious, and have a tendency to terminate in a typhoid state; no patient, however, thus far has died. It appears that the same epidemic influence is equally felt at the Hopital Beaujou. M. Martin Solon has also several erysipelatous patients under treatment. In presence of such an epidemic, surgeons who see farther than their bistouries, and who are governed by general principles, will admit in this fact the incontestable existence of a particular medical constitution which should influence their conduct. Under such circumstances, the prudent surgeon should abstain from operating or performing only those operations which are urgent.

N.

Corrosive Sublimate in Epilepsy.—In an elaborate article upon the Neuroses of the Ganglionic Nerves by M. Merat, Member of the Royal Academy of Medicine, we find the following remarks:—

“Since the year 1810, I have been in the habit of administering the Corrosive Sublimate in the treatment of several nervous diseases,

and more especially of Epilepsy. I have witnessed decidedly successful results from its use in a good many—but certainly it must be confessed, not in the majority—of the cases of this malady. The formula, which I use, will be found in the Dispensatory of Bouchardaut (ed. 1840, p. 394.) A pill, consisting of a sixteenth part of a grain of the Sublimate, one grain of Camphor, three fourths of a grain of Opium, and half a grain of Musk, is given daily; this dose is to be increased every eight days by an additional pill of the same ingredients. Some patients have been able to take one or even two grains of the sublimate in the course of the twenty-four hours. As a general rule, I have never wished to exceed half a grain at most; unwilling to run the risk of inducing a black colour of the skin, as has happened to some patients after a protracted use of the drug.

Revue Medicale.

Professor Cornealini on the Proximate Cause and Treatment of Chlorosis.—From an extensive experience in the wards of the Pavia Hospital—to which he is attached as the professor of clinical medicine—the author deduces the following conclusions respecting this not unfrequent disease:—

1. The essential nature of chlorosis consists of two pathological conditions, both of them appertaining to the solids;—the *first* being an inordinate excitation of the heart and arteries, and the *second* a chemico-vital alteration of the assimilative functions of Chylification and Hæmatosis. It is not possible to determine which of these two conditions is the primary and causal one.

2. No plan of treatment is so certain and efficacious as the exhibition of steel in some form or another: the preparations of this metal acting curatively upon both of the pathological states now mentioned.

3. There is no very marked difference in the comparative efficacy of different chalybeate preparations, except in so far as relates to their solubility in the animal fluids, and perhaps also to their readiness to become disaggregated by the process of digestion.

4. The addition of an acid decidedly increases the efficacy of steel remedies.

5. Steel-filings become converted, in the stomach of chlorotic patients, into the lactate of iron.

6. It is useless—and not unfrequently it is unsafe—to administer very large doses of ferruginous preparations.

Professor Cornelianini has examined with great care the state of the blood in chlorosis; and most of his observations go to confirm the accuracy of MM. Andral and Gavarret's statements respecting the diminution of the normal proportion of red globules and hæmatosine.

Annali Universali. Med. Chir. Review.

The Actual Cautery successfully employed in Gangrene of the mouth.—The case occurred in a female child, five years of age, during the convalescence from an attack of Typhus fever. The pecu-

liar (by some deemed pathognomonic) offensive odour, that accompanies this species of gangrene, was remarked before any actual appearance of the disease was discoverable. There were four gangrenous patches on the upper and lower gums, besides one on the inner surface of the right cheek. Dr. Weber determined to apply the actual cautery to all the diseased spots, and the immediately adjacent parts. This was done, not without difficulty, as may be imagined; and the mouth was directed to be afterwards washed out every two hours with a decoction of Cinchona, to which some *spiritus cochlearæ* was added. The offensive smell ceased immediately after the application of the cautery, and did not again return.

On the third day, the sloughy parts began to detach themselves; at the same time, a few suspicious-looking spots were touched with the nitrate of silver. Several teeth remained "*dechaussées*," and at three points the maxillary (upper) bone was exposed. These necrosed portions, inclosing a molar tooth, and two smaller bits of the lower jaw were subsequently detached. During the progress of the case, an offensive purulent discharge took place from the ears, and numerous small abscesses formed on different parts of the body.

Dr. Weber does not think that, in this case (nor indeed generally), there was any reason to suspect that the gangrenous ulceration of the mouth was in any degree attributable to the action of mercury upon the system. He points out the analogy between this disease—which he designates by the name of *noma* or corroding ulcer—and the *pustule maligne*, so actually described by Boyer and other continental writers.—*Gazette Medicale de Strasbourg, from Ibid.*

On the action of Digitalis and its uses in Diseases of the Heart. By WM. MUNK, M. D. (*Guy's Hospital Reports*, 1844.)—This practical paper is founded upon upwards of 400 observations, which were made during five years of dispensary practice. The tincture has been found the most successful form of preparation as regards the effect produced upon the action of the heart, while the infusion is incomparably superior as a diuretic; and, from want of attention to this distinction, discrepant opinions as to the utility of the medicine have doubtless arisen. The powder, used alone, Dr. Munk considers as worthless, and although in combination (with mercury and squill) it forms a valuable diuretic, it cannot be so employed as a sedative.

The action of digitalis upon the heart is manifested in two ways: by the exertion of a depressing influence, and as an antispasmodic. Hypertrophy of the organ, whether simple or complicated with other disease, causing increased impulse, may be benefitted by the *depressing* influence of digitalis, which is best obtained by giving the uncombined tincture, in tolerably full doses, at intervals of eight, ten, or twelve hours. The *antispasmodic* influence, acting so beneficially in the irritable condition of the heart manifested by palpitations, irregularity, &c., is that which is usually sought from digitalis. Dr.

Munk does not agree with those writers who state the action of the digitalis upon the heart to be uncertain. Its operation is as certain, in properly-selected cases, as that of other medicines, and may be maintained with safety.

There are, however, circumstances under which this medicine cannot be exhibited usefully or safely. Thus, in a plethoric state of the system, its employment must be deferred until bloodletting or other evacuants, for which it is no substitute, have played their parts. An inflammatory, or sub-inflammatory condition of the gastric and intestinal mucous membrane, seems to prevent the action of digitalis upon the heart; and increased irritation results if it be persisted in. Such complication of lesion of the heart and gastric derangement is by no means rare, and in such cases prussic acid is the appropriate medicine. Quietude of mind and body much favor the action of digitalis. The recumbent posture is very adjuvatory to its depressed action; and Dr. Lombard truly observes, that it is rarely efficacious in those who take much exercise, or whose attention is much occupied during its use. Dr. Munk gives ℥x. ad xxx. every eight, ten, or twelve hours, and is rarely disappointed. He does not reduce the pulse, which is to be carefully watched, below 60 in the adult, and thus derives the beneficial without risking the production of the dangerous effects.

Digitalis rarely acts as a *diuretic* when its influence upon the heart is marked, and *vice versa*. The author quite concurs in the high opinion Withering entertained of its power of increasing the flow of urine, which is seldom accomplished by any other drug after its failure. It is not to the robust, florid, or wiry-pulsed, but to the enfeebled, shattered, condition of the system, that digitalis is applicable. "If the pulse be feeble or intermitting, the countenance pale, the lips livid, the skin cold, the swollen belly soft and fluctuating, or the anasarcaous limbs readily pitting on pressure, we may expect the diuretic effects to follow in a kindly manner." These remarks were penned, it is true, in reference to dropsy, from whatever cause arising; but *mutatis mutandis*, they are equally applicable to all cases in which the diuretic operation of foxglove is required. In disease of the heart, a diuresis is frequently a valuable means of preventing effusions by diminishing congestion, or of producing their absorption if they have already occurred; but whether digitalis be the appropriate remedy or not, depends in chief upon whether a sthenic or asthenic condition of the system prevail. Thus in the case of hypertrophy, it is seldom appropriate, while in dilatation it is usually the best of diuretics. Valvular disease is that in which digitalis proves most useful, except in cases in which this is complicated with hypertrophy. The *infusion* is to be given in doses of ℥ss. to ʒj. every six or eight hours. With a view of preventing the sedative operation of the drug, moderate exercise, short of diaphoresis, should when possible be taken. A moderate quantity of drink may be given, and the loins must be covered with a double

roll of flannel, or, as recommended by Lombard, a stimulating plaster may be applied to them.

Dr. Munk believes that untoward and fatal effects, resulting from the continued employment of this medicine, are "exceedingly rare," and cites the opinions of Drs. Holland and Pereira as confirmatory of his own.

"It has only occurred to me to see the slighter and less portentous of these symptoms as a consequence of foxglove; such as inequality or intermittence of the pulse, loss of appetite, and frontal headache: either or all of which have at once subsided on discontinuing the medicine. I believe that such symptoms will only occur when the drug fails to act in a normal manner as a sedative or a diuretic. If either of these effects are once obtained in a kindly manner, I then consider my patient safe from the poisonous operation of the drug. If on the contrary, it does not evidence its usual effects within a few days, the medicine, I believe, accumulates in the system, and the patient is in danger of experiencing its poisonous influence. I am therefore in the habit of prescribing it for a week: and, if within that period, I perceive neither sedative or diuretic effects, I then invariably desist from its administration. Let these effects, however, be once kindly induced and the medicine may then be continued with safety for a considerable period. In no one instance have I seen a bad effect follow the use of digitalis where the first consequences of its exhibition were the removal of material alleviation of prominent or distressing cardiac symptoms, whether this has been brought about by its operation as a sedative or as a diuretic."—*Med. Chir. Rev.*

Neuralgia—Introduction of Medicated Fluid to the Nerve. By Mr. RYND. (*Reported by Mr. Richard Gregory.**)—Margaret Cox, ætat. 59, of spare habit, was admitted into the hospital, May 18th, 1844, complaining of acute pain over the entire of left side of face, particularly in the supra-orbital region, shooting into the eye, along the branches of the portio dura in the cheek, along the gums of both upper and lower jaw, much increased in this situation by shutting the mouth and pressing her teeth close together, and occasionally darting to the opposite side of the face and to the top and back of her head. She states that about six years ago she fell from a wall, and, in the act of falling, a stone struck her in the temple; that twelve months after this she was much exposed to cold, and one night was suddenly seized with the most agonizing pain in the situations above described. "She thought her eye was being torn out of her head," and her cheek from her face; it lasted about two hours, and then suddenly disappeared on taking a mouthful of ice. She had not had any return for three months, when it came back even worse

*Meath Hospital and County of Dublin Infirmary.

than before, quite suddenly, one night on going out of a warm room into the cold air. On this attack she was seized with chilliness, shivering, and slight nausea; the left eye lachrymated profusely, and became red with pain; it went in darts through her whole head, face and mouth, and the paroxysm lasted for three weeks, during which time she never slept. She was bled and blistered, and took opium for it, but without relief. It continued coming at irregular intervals, but each time generally more intense in character, until at last, weary of existence, she came to Dublin for relief.

She had been salivated three times, and had been so much in the habit of taking laudanum that latterly half a drachm, three times in the day, had no effect in lulling the pain, and was the quantity she commonly took. She was a miserable, sallow-complexioned looking creature, had been sleepless for months, and her face was furrowed with constant pain.

On the 3d of June a solution of fifteen grains of acetate of morphia, dissolved in one drachm of creosote, was introduced to the supra-orbital nerve, and along the course of the temporal, malar, and buccal nerves, by four punctures of an instrument made for the purpose. In the space of a minute all pain (except that caused by the operation, which was very slight) had ceased, and she slept better that night than she had done for months. After the interval of a week she had slight return of pain in the gums of both upper and under jaw. The fluid was again introduced by two punctures made in the gum of each jaw, and the pain disappeared. After this the pain did not recur, and she was detained in the hospital for some weeks, during which time her health improved, her sleep was restored, and she became quite a happy looking person. She left the hospital on the 1st of August in high spirits, and promised to return if she ever felt the slightest pain again. We conclude she continues well, for we have not heard from her since.

CASE II. R. Dolon, ætat. 28, a thin spare man, of middle stature, was admitted into the hospital 9th September, 1844, and came under Mr. Rynd's care on the 10th of November, complaining of acute pain in the right hip, thigh, and leg, to the sole of the foot, along the entire course of the sciatic nerve and its branches, but chiefly in the main trunk of the nerve. He is unable to sleep from the pain, and quite unable to walk. He is much emaciated, and the muscles of the limb are attenuated and wasted. He has been ill for three years, during which time he has been almost always confined to bed. He has been frequently treated for the disease with calomel, to produce salivation, cupping, blistering, leeching, &c., all without any salutary effect. Exposure to cold and wet is assigned as the cause of the disease.

On the 13th of November, the fluid was introduced, ten grains acetatis morphiæ to the drachm of creosote, one puncture behind the trochanter, and one half-way down the thigh. He was instantly relieved from pain, and walked steadily through the ward without any

pain or difficulty; before, walking increased the pain. For about half an hour after the operation he felt uneasiness from the puncture.

16th. Says he is perfectly well in the thigh, and feels only a slight pain in the course of the anterior tibial nerve. The fluid was again introduced to-day to the seat of pain by two punctures; it disappeared as before.

29th. Says he is perfectly well; has walked every day since; has slight stiffness in the knee from previous want of use.

Ordered, camphorated oil to rub the knee with.

December 15th. Left the hospital to-day, saying he felt perfectly free from all pain and uneasiness.

February 6th. He walked up to Dublin to-day (twenty miles), and says that since the last operation, on the 16th of November, he has never felt his old pain, and is perfectly well.

ADDITIONAL TESTIMONY.

Gentlemen,—I observed in the Medical Press, March 12, two cases of neuralgia, treated by Mr. Rynd in the Meath Hospital, by a new method of introducing morphine and creosote to the nerve affected; the result proved most satisfactory. It had been my intention long since to have sent you an account of some cases treated by me during the last summer in a similar manner, and with most happy results, but much occupation this winter prevented my doing so. I hope, also, on a future occasion, to send you some cases of other diseases, such as dyspepsia, hooping-cough, &c., treated with proto-iodide of silver—a remedy I believe hitherto little used.

Case.—Last summer, an elderly female, much emaciated, and with countenance indicative of much pain and suffering, was sent up by her medical attendant from the country for the purpose of sea-bathing. She had had severe neuralgia of the nerves on outer side of leg, shooting from her knee to her ankle and foot. She had been subjected to a variety of treatment, such as leeches, blisters, an incision down to nerve, and cutting it across, &c. She was quite lame when I saw her, and it hurt her much to put her foot to the ground; she suffered greatly at night, and could not sleep. She had been here some time, and had bathed without any benefit. I made several small punctures along the course of the nerve affected. I used a common lancet, armed with morphine, mixed in a little water, about the consistence of paste, and operated precisely as is done in vaccinating an infant; I did not use creosote with it. She felt slight stinging and uneasiness for a short time after, but that night she slept well, and next day stated that the pain, with the exception of one or two spots, was quite gone. I punctured in these places again. She again recovered.

On inquiring from her friends a short time since, I heard she has continued in good health ever since—a period of nearly nine months.

I adopted the same mode of treatment in a case of sciatica with similar success. In another bad case of neuralgia in the foot and leg in a man who had been subjected to a variety of most active

treatment in hospital, and with very little benefit, I determined on using creosote *without morphine*. I had not heard of its being used before until I read of it in the Press as used by Mr. Rynd, but in his case he mixed it with morphine. It was of decided benefit in my case, and the man has been able to go to his work, and has continued well to this time—a period of about seven months.

As neuralgia is a disease that so frequently baffles the skill of the physician, I think it is not unworthy of the profession to give this mode of treatment a trial, and I should much like to know whether it has as yet been much adopted.

I beg to remain, gentlemen,

Your obedient servant,

ARTHUR GUINNESS.

Dublin Med. Press.

Caoutchouc as a Remedy for Tooth-ache.—Caoutchouc becoming very smooth and viscous by the action of fire, has been proposed by Dr. Rolfs as an excellent remedy for filling hollow teeth and alleviating the toothache proceeding from that defect. A piece of caoutchouc is to be put on a wire, then melted at the flame of a candle and pressed, while warm, into the hollow tooth, and the pain will disappear instantly. The cavity of the tooth should first be cleaned out with a piece of cotton. In consequence of the viscosity and adhesiveness of the caoutchouc, the air is completely prevented from coming in contact with the denuded nerve, and thus the cause of the toothache is destroyed.—*Braithwaite's Retrospect.*

Jaundice.—The Gazette Médicale (April, 1845,) contains a notice of M. de Lonjon's researches on the diagnosis of Icterus, from which it appears that he has ascertained that, besides the usual yellow tint presented by the mucous lining of the mouth, this is strongly manifested, even in the slightest cases of this disease, in the soft palate, or velum pendulum palati, from its posterior margin to its juncture with the bony roof of the mouth. D.

Febrile Periodicity, as influenced by the Sulphate of Quinine. By THOS. D. MITCHELL, M. D., Prof. Mat. Med. and Therap., in Transylvania University.—But a few years ago, the therapeutical application of this invaluable salt of Peruvian bark, was exceedingly limited; and with some, even at this day, it is held to be competent, as a remedy, only to true intermitting fever, or ague and fever.

The doctrine, that all fevers and all diseases, are essentially intermittent, has long been before the public; and while we are ignorant of the nature and source of periodicity, the fact of intermittence is as well established, as any other in medicine. And although a late writer has asserted boldly, and without exception, that *Therapeutics*

cannot be based on Pathology, we aver as positively, that the direct opposite is true. We believe, especially in reference to fevers, almost without exception, that they are curable by sulphate of quinine, simply and solely, because it is a remedy, above all others, adapted to diseases of an intermittent and remittent character; their terms being substantially, and in fact, as to periodicity, the same.

In regard to the Pathology of Fevers, we know almost nothing, perhaps nothing at all, that is practically of the smallest value, save the naked fact of intermittence or periodicity. This is cognisable when we can scarcely fix upon another point, that is worthy of notice or remark.

We cure an *ague* and fever, by sulphate of quinine, no matter whether it be a true and open *ague*, or a masked intermittent. And we cure many diseases of genuine neuralgia, unattended by chill or fever, at all perceptible, by the same agent. These are common cases, with which all practitioners are familiar, and they clearly set forth the adaptation of the remedy, on the ground of intermittence.

But if we look a little further, we shall discover, that other fevers, called by different names, merely to subserve the interests of theory, possess one common property, which, confessedly under the control of the sulphate of quinine in the case of common *ague* and fever, is no less so in Typhoid, Typhus, Congestive, Yellow, and it may be, all the fevers named in the books.

The position I assume here, is plainly and boldly this: *there is but one feature or element in either of the fevers named, that is essential to its pathology, and that feature or property or element bows before the potent sway of the sulphate of quinine, and for this reason only, we cure the patient.*—*Western Lancet.*

Tracheotomy, performed successfully in a case of Œdema of the Glottis—translated from the Bulletin de Thérapeutique.—On the 23d March, 1845, Sageot, while in the Hopital du Midi, into which he had been admitted on February 1st, was taken with a quinsy, apparently slight, and which for three days caused only a slight difficulty of deglutition. On the morning of the 27th, an inconsiderable febrile movement occurred, with loss of appetite; soon dyspnœa supervened, and increased suddenly in the evening to a frightful degree. The patient, in a sitting attitude, makes unheard of efforts to inspire air which penetrates with a whistling sound—the voice is nearly extinct—expiration is easy; on inspection, a slight tumefaction of the amygdalæ is found, with redness of the mucous membrane. The finger carried deeply into the pharynx, discovers in the vicinity of the arytæno-epiglottic duplicatures, a soft tumour, yielding to pressure. This tumour is incised with the point of a bistoury, and from it only a few drops of blood escape. Suffocation becoming more

and more imminent, M. Ricord is sent for at 10 o'clock, P. M.; finding the patient with his face of a violet color, the extremities cold, the pulse very frequent and very small, and the pupils enormously dilated, that surgeon, after having again recognised the existence of the supra-epiglottic tumour, determined to perform tracheotomy. The incision was made in the crico-thoroid membrane and in the cricoid cartilage, the lips of the wound were kept separate by hooks fixed by means of a riband behind the neck. Respiration was immediately re-established, and in an hour the patient slept quietly. The pulse having risen three hours afterwards, M. Ricord prescribed twelve leeches, six on each side in the vicinity of the jugular veins. April 4th, the supra-epiglottic tumour presents but a very small volume, and the canula, which on the 29th March had been substituted for the hooks was withdrawn, and the patient was much improved after the extraction of the canula. On the following days the opening made in the trachea diminished more and more in extent, respiration and deglutition are performed without any pain or embarrassment, and on the 12th April the patient was perfectly cured. N.

M. Cazenave on the different sorts of Caustics.—The *Powder of Dupuytren*, is composed of one part of arsenious acid and 200 parts of calomel. It is a mild and very manageable caustic, that is useful in cases of lupus in women and children, when the ulceration is superficial and of limited extent. If the diseased part be dry, it may be necessary to denude it by means of a blister, and then to sprinkle the powder upon the raw surface. A certain amount of heat and painful swelling is usually caused by this application. When it falls off, there is generally observed a decided modification of the diseased surface. A few applications are sufficient to effect a cure in a great many instances.

The *Vienna power and paste* are remedies of great power in certain cases of lupous ulceration. They are composed of equal parts of powdered quicklime and potassa cum calce. In using it, we take a portion of this mixture, and add a small quantity of spirits of wine to bring the powder to the consistence of a paste. A piece of adhesive plaster, with a hole in it of the size of the intended eschar, should be laid over the diseased surface, and the paste is then applied on the exposed parts. It is to be left for ten or twenty minutes, according to the depth of the eschar that is wished, and the ability of the patient to endure the pain.

The *chloruret of zinc paste* is much used in the present day. It is made by mixing one part of this substance with one or two parts of flour, moistening the mixture with as little water as possible. The pain produced by this application usually lasts for several hours. A

greyish-coloured eschar is formed; and this, in most cases, remains attached for two or three weeks before it is separated. The surface underneath is generally not ulcerated. M. Cazenave very frequently has recourse to this caustic in certain cases of lupus, to destroy the non-ulcerated tubercles.

For this purpose he applies only a very thin layer of the paste, so as not to destroy the entire tubercle; and in this manner he often succeeds in effecting a complete resolution of it, without any scar being left behind.

In very many cases of long standing and deeply-corroding lupous ulceration, he gives the preference to the arsenical paste over the two others which we have mentioned: its action is twofold; local as a caustic; and general by becoming absorbed, and exercising a potent alterative or modifying influence upon the economy. The following is the formula which he invariably uses:

Take of White oxyde of arsenic, 2 parts.

Sulphate of mercury, 1 part.

Animal charcoal in powder, 2 parts.

When used, a small quantity of this powder is to be made into a thin paste by the addition of a few drops of water; this is put upon the denuded surface—which should seldom or never exceed in extent that of a franc-piece. This application usually produces not only very sharp pain, but also a severe erysipelatous swelling, which lasts for 24 or 36 hours, and is sometimes accompanied with grave constitutional symptoms. Generally these subside very quickly; and then there remains on the cauterized part a hard brown crust which often adheres for nearly a month, before it is detached.

Fluid Caustics.—M. Cazenave frequently makes use of a solution of the sulphate of copper for the removal of those small warts that often form upon the shoulders and back, also of certain pediculated horny productions, which occasionally appear upon these parts. A stronger solution must be used for the latter form of cuticular excrescence.

In the treatment of favus and tinea, he recommends a weak solution either of this salt of copper, or of the nitrate of silver, or of acetic acid.

Of fluid caustics, one of the most potent and useful is the acid nitrate of mercury. When used to the surface pure and undiluted, it acts as a mere caustic; but when considerably weakened, and especially when applied to a large surface, it is unquestionably absorbed, and then it acts on the system.

It usually causes a good deal of pain and inflammatory swelling. The cases most benefitted by its application are those of lupus, in which the ulceration is extensive and not deep-seated.

The erysipelatous inflammation, which this as well as other caustics—more especially the arsenical paste—are apt to produce, need not be much dreaded; nay, the effects of the cutaneous phlegmasia seem sometimes to be decidedly salutary in the end.—*Annales des Maladies de la Peau.*

M. Gibert has recorded in a recent No. (Oct., 1844) of the *Revue Medicale*, a case of severe scrofulous lupus of the face, in which the progress of the disease was arrested and the extensive ulcerated surface became cicatrized under the employment, external as well as internal, of cod-liver oil. The use of this medicine was steadily persevered in for a full year and a half. During this time not only did the local malady become healed, but the general health—which had formerly been very weak and ailing—was very decidedly improved.

The patient was a young woman, and the disease had existed for nearly six years. On one occasion she had derived very considerable benefit from the internal administration of the deuto-ioduret of mercury, and the external use of the proto-ioduret ointment; but the benefit was temporary only. She had been subjected to a regular and protracted course of iodine treatment; but certainly with no advantage.—*Med. Chir. Rev.*

Tubercular thickening of the Lip, successfully treated by Iodide of Potassium. By ALEXANDER URE.—Mrs. H., aged 28, admitted the 16th Sept., 1844. The upper lip is greatly enlarged and prominent; its external surface is the seat of superficial ulcers, for the most part covered with crusts. The affection commenced six months previously, as a hard round swelling in the right side of the lip, untended with discoloration. The swelling subsequently extended over the whole lip, and is always most conspicuous in the morning.—Several indurated tubercles can be felt imbedded throughout its substance. States that her general health is good. Her tongue is clean, but the pulse is rather frequent, and she complains of thirst.

Ordered a solution of Epsom Salt and Tartar Emetic twice a day; and to pencil over the excoriated surface every morning with a lotion containing ten grains of Nitrate of Silver dissolved in an ounce of pure water.

23d. Sores are all healed, but the swelling remains as before.

To take five grains of Plummer's Pill, night and morning.

27th. No change in the condition of the lip.

Ordered five grains of the Iodide of Potassium, dissolved in water, twice daily.

Oct. 4. The swelling is considerably diminished; the tubercles much lessened in size.

To continue the Iodide of Potassium.

8th. Tumefaction quite gone; no tubercles to be felt.

The above case exemplifies, in a striking manner, the power of iodide of potassium in promoting the absorption of a variety of tubercular deposition, which seemed to bear some resemblance to elephantiasis in its primal stage.—*Med. Gaz.*

Spasmodic Strictures of the Urethra.—The 'Archives Médicales' for February, 1845, contains an able article on the subject of spasmodic strictures of the urethra, by M. Gosselin, one of the 'agregés'

of the Faculty of Paris. M. G. arrives at the following conclusions :
 1st, That anatomy forbids the belief that spasmodic strictures can exist in any other than the membranous portion of the urethra ;
 2d, That the arguments of authors opposed to this view, are very weak ;
 3d, That facts authorize their admission only in such cases where already exists an organic stricture, or gonorrhœa. D.

Medical Statistics.—It appears from the Medical statistics of France, published by M. Lucas Champoniere, that there are in that kingdom 18,800 Doctors of Medicine, or one to every 1810 inhabitants ; besides 8,088 sub-physicians termed "officiers de santé." That the number of the latter class of practitioners is diminishing whilst that of the former is on the increase. In the course of the last nine years the Degree of M. D. has been conferred on 4,774 persons, and 2,616 "officiers de santé" have been licensed. D.

Gaz. Méd., April, 1845.

Instruction of Midwives in Paris.—According to the new regulations regarding the instruction of Midwives in Paris, it is required that they shall present testimonials of good character, be at least eighteen years of age, and be able to read and write correctly the French language, before they can be admitted to the clinical lying-in hospital. It is only after having diligently attended this institution for twelve months, and taken two full courses of lectures on the Theory and Practice of Midwifery, that they can present themselves as candidates for the Degrée. D.

MEDICAL INTELLIGENCE.

Extract of a letter from JOHN MCLESTER, M. D., late Demonstrator of Anatomy in the Medical College of Georgia.

PARIS, March 30th, 1845.

Longet's lectures on the Anatomy and Physiology of the Nervous System, with vivisections, are extremely interesting. He has devoted himself to this branch of science for several years, and at this time, is unequalled in it. His demonstrations are admirable, and by varying his experiments in almost every possible manner, he has made some discoveries, and exposed the errors of Majendie, Marshall Hall, Charles Bell, and others. I saw him demonstrate the existence of an electrical current in the muscular tissues in the following manner:—He stripped the skin off the inferior extremities of some frogs, decapitated at the moment, then cut the thighs off close to the body, separating them

from the legs, by carefully disarticulating the knee joint. Five thighs thus prepared, were arranged in a semicircular manner, with the lower end of one, stuck in among the muscles of the upper extremity of another, and so on. The battery being thus completed, he used bits of moistened paper, or wire for conductors, and by operating on the sciatic nerve of another frog, contractions were produced, precisely similar to those caused by galvanism. This current runs from the centre towards the extremities. These experiments, though cruel, are extremely interesting. Most of them are easy of performance, and with proper precautions, are highly satisfactory and conclusive. Longet's dissections of the brain, spinal marrow, and nerves, are superior to any I have seen. His work on this subject is the best extant. * * * * * Foville is publishing a work on the Anatomy, Physiology, and Pathology of the Cerebro-spinal System of Nerves, in three volumes, with an atlas of twenty-three plates. The first volume and the atlas are published. It is said to be an excellent work. * * * * * Ricord is publishing his *clinique*, accompanied by fifty or sixty plates, in quarto, colored. The work is said to be nearly completed, and will cost ninety francs. It is said he has changed his opinions in some respects, since the publication of his former work.

METEOROLOGICAL OBSERVATIONS, for May, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 33' west Wash.

MAY.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sun rise.	4, P. M.	Sun rise.	4, P. M.		
1	62	85	30 in.	29 9-10	S. E.	Fair.
2	64	79	29 8-10	29 8-10	N. W.	Cloudy—thunder.
3	65	86	29 8-10	29 8-10	N. W.	Variable.
4	65	88	29 8-10	29 8-10	S. W.	Variable.
5	67	87	29 8-10	29 8-10	S. W.	Variable—thunder and light'g.
6	70	83	29 7-10	29 7-10	S. W.	Cloudy.
7	62	83	29 7-10	29 6-10	W.	Fair.
8	53	78	29 8-10	29 9-10	N.	Fair.
9	47	78	30 in.	30	S. E.	Fair.
10	51	82	30	30	S. E.	Fair.
11	60	79	30	29 9-10	E.	Cloudy. [1 5-10 inches.
12	62	74	29 8-10	29 8-10	N. E.	Commenced to rain at 4, P. M.,
13	65	78	29 8-10	29 8-10	N. W.	Variable.
14	62	84	29 8-10	29 7-10	S. W.	Variable.
15	63	62	29 5-10	29 5-10	N.	Clear—rain last night 1 3-10 in.
16	53	66	29 6-10	29 6-10	N. W.	Fair.
17	47	72	29 7-10	29 7-10	W.	Fair.
18	49	80	29 8-10	29 8-10	W.	Fair.
19	52	83	29 8-10	29 8-10	S. W.	Fair.
20	56	86	29 8-10	29 8-10	S. W.	Fair.
21	62	86	29 8-10	29 8-10	S. E.	Cloudy, and thunder,
22	62	86	29 8-10	29 7-10	S. E.	Misty in morning.
23	65	88	29 6-10	29 6-10	W.	Variable.
24	66	74	29 5-10	29 6-10	N.	Cloudy—a little rain.
25	59	74	29 8-10	29 8-10	N. E.	Variable.
26	50	78	29 8-10	29 8-10	S.	Fair.
27	53	80	29 8-10	29 8-10	E.	Fair.
28	60	82	29 8-10	29 7-10	N.	Variable.
29	62	89	29 7-10	29 6-10	W.	Fair—dry storm at 7, P. M.
30	66	80	29 7-10	29 8-10	N. E.	Variable.
31	55	74	30 in.	30 in.	N. E.	Fair.

Fair days, 11. Quantity of Rain, 2 8-10 inches.

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[No. 8.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Observations on Geophagy. By JOHN LE CONTE, M. D.,
of Savannah, Georgia.

MIRBEL has proposed to distinguish vegetables from animals by the different nature of their *food*:—the former deriving their nutriment, as he affirms, from *inorganic* matter, and the latter from *organic*:—That plants transform dead matter into organized principles, and thus prepare food suitable for animals. (*Traité d'Anatomie et de Physiologie Végétale, etc.*) Another distinguished physiologist, M. Virey, in the *Nouveau Dictionnaire d'Histoire Naturelle*, Article ALIMENT, maintains, on the contrary, that plants as well as animals are supported by *organic* food; since, as he contends, it is the *debris* of organized matter mixed with the soil, that furnishes vegetables with their appropriate *pabulum*, as likewise those animals, such as earth-worms, the larvæ of ephemeræ, etc., which have been supposed to live upon earth. M. Virey ingeniously endeavors to support this hypothesis by the fact, that the fertility of a soil depends upon the quantity of *humus* or vegetable mould, which it contains, and that worms, etc., are not to be found in very barren soils. It appears, however, from the masterly researches of Liebig and others, that the so-called *humus*, in the form in which it exists in the soil, does not yield the smallest nourishment to plants; that it only accelerates their growth, in so far as it serves as a medium of fixing the inorganic elements around the spongioles or absorbing extremities of the

roots, or of slowly extricating carbonic acid in the gradual progress of decomposition. Moreover, it is universally admitted that *humus* arises from the *eremacausis* or slow decay of plants. No primitive *humus*, therefore, can have existed; for plants must have preceded the humus. The first vegetables must have, consequently, derived their carbon from some other source than organic matter:—that supply is furnished in the form of carbonic acid by the atmosphere.

There are satisfactory evidences drawn from geological considerations, as well as *a priori* reasons deduced from the physiology of the function of nutrition in the respective kingdoms of organic nature, for believing that vegetable organization *preceded* the development of animal life, in the physical revolutions which the crust of the globe has undergone. Vegetables seem to constitute the intermediate link in the scale of creation, between the Inorganic world and the Animal kingdom; and although in a few instances they are partially dependent upon the latter for their existence, it cannot be doubted that the general balance is greatly in favor of the supplies they afford. The distinction laid down by M. Mirbel, based upon the character of food, has, therefore, been confirmed as a *general* law in the two organic kingdoms.

Plants constitute an immense apparatus for reduction, in which is habitually created true organic matters fit for the assimilation of animals:—so that, in this point of view, we might justly and philosophically say, that “all flesh is grass,” without even imposing a violently metaphorical character upon our language. On the other hand, animals constitute an immense apparatus for combustion,—reproducing the elements, which are returned into the air and the earth. Thus it is in the vegetable kingdom that the great laboratory of organic life resides;—there it is that the vegetable and animal matters are formed, and they are produced at the expense of the air and the inorganic constituents of the soil. From plants, these matters pass ready-formed into the herbivorous animals, which destroy a portion of them, and accumulate the remainder in their tissues:—From these, they pass unaltered into the carnivorous animals, who destroy or retain some of them according to their wants:—Lastly, during the life of these animals, or after their death, these organic matters, as they are destroyed and resolved into their ultimate elements, return to the atmosphere and to the earth,—the reservoirs whence they proceeded,—to be again used in perpetuating the mysterious cycle of organic life on the surface of our planet. It is thus,

that the grand "physiological balance" in organized beings,—so eloquently illustrated by M. Dumas,—is maintained :—adaptations, adjustments, reciprocal dependence of parts, and conformity of arrangement, appear everywhere pervading both systems ;—checks and compensations are perpetually in operation, which must maintain the equilibrium between the kingdoms of organic nature,—just as the masses of the planets,—the eccentricities of their orbits,—the direction of their motions,—and the inclinations of the planes in which they revolve, are all arranged so as, according to the beautiful theorems of Lagrange and Laplace, to preserve the stability of the solar system, by affixing limits, maxima and minima, between which the irregularities oscillate.

As there exists a close affinity between animals and vegetables in the respective groups of Phytozoa and Protophyta ;—so do we observe an analogous gradation with respect to the sources of nutriment. Some appear to be exceptions to the general law founded on the difference of food. The only class of Plants which seems to be *dependent* for its support upon matter already organized, is that of Fungi,—a group of peculiar interest, as presenting us with two curious analogies with the Animal kingdom, in the extrication of carbonic acid, and in containing *fungin*, a proximate principle as highly azotized as animal flesh. (Carpenter's Principles of General and Comp. Physiology, 2d Ed. London, 1841. Paragraph 277, p. 217.) A remarkable mode of obtaining nutriment is afforded by some species of *Parasitic fungi*, which are found growing on the larvæ of certain coleopterous, lepidopterous and hymenopterous insects. One species, which was sent to France by Father Parenin, is in high estimation, as an article of the Materia Medica, among the celestial nobles at the palace of Pekin. Dr. J. Pereira thinks that this fungus belongs to the genus *Sphæria*, and is closely allied to the *Sphæria entomorrhiza* of Dickson. An analogous species has been found in New Zealand, called the *Sphæria Robertsii*, which grows from the neck of the caterpillar, to the length of six or eight inches. (Phar. Journ., as cited in the New-York Journ. of Med., etc., vol. 1, p. 128–131. 1843.) Such growths are also found on coleopterous insects. The larvæ of the *melolontha*, not unfrequently exhibit a vegetable sprout three inches in length, proceeding from between the head and the under part of the thorax. The larvæ are *not only dead, but in a state of decay*, and the sprout rising from the ground indicates where they are found. A species of *curculio*, in the perfect state, from Mexico, has

also been mentioned as having long slender filaments attached to various parts of the body,—and in one specimen, it had a sprout on the rostrum or beak, which gave it the appearance of an additional horn. A species of hymenopterous insect, made known under the name of “vegetating wasp” by a Spaniard, named Father Torrubia, inhabits the same country. He says, that in 1749, he found some *dead wasps* in a field in New-Spain, from the belly of each of which a plant germinated, growing about five spans high. Similar vegetating wasps are said to have been found in the Island of Dominica. The parasitic plant,—considered to be a species of *clavaria*,—which grows from them, bears several pods, which are supposed by the inhabitants to “drop off and become worms, and from thence flies.” The common wasp of this country, *when dead*, has been observed to give origin to analogous vegetable growths, as likewise the pupæ of a species of *cicada* which is common in Martinique and Dominica. Kirby and Spence mention one specimen of the last genus in their cabinet, “with a kind of *Sphæria* with a twisted thickish stripes and oblong head, springing up in the space between the eyes.” Some imago specimens of lepidopterous insects have been brought from the tropical regions, covered with long slender filaments. They are always in a very *decayed state*. (Vide. Natural History of Insects, Harper’s Family Library; Second Series, No. 74, p. 260 to 265 : New-York, 1840. 12mo. Also, Dr. Samuel L. Mitchell’s letter to A. P. De Candolle, in Am. Journ. of Science and Arts, vol. 12, p. 21–28, 1827.) M. J. B. Ricord-Madianna, however, states, that he has observed at Guadaloupe a nest of wasps, the greatest number of which were encumbered with these cryptogamous excrescences. As they quitted the nest, they fell to the ground, and could not rise again on account of the weight of the plant, which had taken root on some part or other of their body, particularly on the sternum. Having observed the larvæ contained in the cells, M. Ricord remarked, that they also had this cryptogamous appendage, but then it was very small. Of course the fungus was developed on the *living insect*, although apparently in the last stages of existence, and seeming about to perish from the influence of its destructive parasite. This species appears to have been the *Sphæria entomorbiosa* of the English botanists. (*Journal de Pharmacie*, as cited in Brande’s Quarterly Journal of Science, etc., New Series, vol. 6, No. 12, p. 437–438 : London, Jan., 1830.)

The singular epidemic disease to which the silk-worm is liable,

called *muscadine*, and first described by M. Bassi, is occasioned by a parasitic fungus, named the *Botrytis Bassiana*, from the discoverer. The characteristic signs of the disease do not appear until after death, when the body is bedecked with a white powdery efflorescence, becomes dried up, and as it were, mummified. This efflorescence is mould, the germs of which must have been nourished at the expense of the silk-worm. According to Dr. Stilling, of Cassel, an analogous disease is found in frogs, under certain circumstances. (Vide. Fletcher's Elements of Gen. Pathology, Edited by Drs. Drysdale and Russel, pp. 74 et 75. (note.) Edinburgh, 1842.) In the majority of the above-mentioned cases, it is reasonable to presume,—from the decayed state of the insects,—that the *spores* of the fungi found a suitable nidus for germination in the mass of decomposing organized matter. The two last instances appear to be exceptions to this general rule.*

When plants are made to grow in infusions of madder, the radical fibres are tinged of a red color. From experiments made by Sir H. Davy on the growth of plants in weak solutions of sugar, gum, gelatine, the tanning principle, etc., in all of which they grew luxuriantly; and from those of M. Biot, in which, a white hyacinth became red after a few hours, when the earth in which it was planted was sprinkled with the juice of the *Phytolacca decandra*;—it has been concluded that *organic* substances, do, under favorable circumstances, enter into the roots, and thence into the circulation, of vegetables. It is to be remarked, however, that organic coloring matters, when

* A species of parasitic fungus discovered by Lewis D. De Schweinitz, and described under the name of *Isaria Sphingum* (Synop. Fung. carol. Sup. p. 100,) is remarkable as being found proceeding in all directions from the abdomen, nerves of the wings, etc., of a *sphinx* resting upon a branch with expanded wings. Although the insect was dead when thus discovered, yet the position in which it is usually detected, and the other attending circumstances, afford a strong presumption that the fungus was evolved while the *sphinx* was yet in a state of existence. It may be doubted whether the vegetable ever predominates over the animal life, while the vital principle of the latter is in full energy; but that the larvæ, in a feeble state, may have afforded a fit recipient for the seed of the fungus, while their complete evolution was retarded by some cause, until the final transformation of the insect, is certainly not improbable. In this respect they may offer some analogy with the helminthoid entozoa, such as the *ascarides*, *larice*, *hydatids*, etc., which are most commonly observed to prey upon animals of debilitated or languishing health. (Vide. Paper by Abraham Halsey, in Annals of the Lyceum of Nat. Hist. of New-York, vol 1, Part 1st, p. 125-126: 1824.)

thus introduced into plants, do not generally extend upwards to the leaves and flowers. The madder does not usually discolor the leaves. The color imparted to the white hyacinth, in the experiment of M. Biot, disappeared in the sunshine in the course of a few days. Organic matters, therefore, undergo some chemical change either in the stem, in the leaf, or in the flower. (Vide. Lectures on the Applications of Chemistry and Geology to Agriculture. By James F. W. Johnson, M. A. F. R. SS. L. et E. etc.—Am. Ed. Wiley and Putnam: New-York, 1844. Part 1st, p. 64.) According to Mr. G. T. Burnett, the pitchers of the *Sarracenia* and *Nepenthes* are true sarcophagi, and constitute the nearest approaches,—the strongest adumbrations of a stomach in vegetables.* In them, a process very much like animal digestion goes on; for it appears that the fluid they contain is very attractive to insects, which, having reached its surface, are prevented from returning by the direction of the long bristles that line the cavity. The bodies of those which are drowned seem, in decaying, to afford a supply of invigorating nutriment as favorable to the growth of these plants, as a similar process on the leaves of the well-known *Dionæa muscipula*, to the health of which, a supply of animal food appears to be essential. (Vide. Brande's Quarterly Journal of Science, etc.; New Series, vol. 6, No. 12, p. 279 to 293: London, Jan., 1830.)

Although such instances as these may seem to contradict the general statement, that Plants derive the materials of their nutrition from the *inorganic* world, yet they probably do so more in appearance than in reality. In most cases where previously-organized matter influences their growth, it is only whilst in a decomposing state, during which it is separated into its ultimate elements or very simple combinations of them. We find in the Animal kingdom also, many apparent exceptions to the general statement which has been made respecting the source of their nutrition. Thus the *spatangus*, various species of *holothurizæ*, the *earth-worm*, some kinds of *beetles*, many *conchifera*, and several *cephalopoda*, are known to swallow

* Rumphius has observed, that a certain small squilla or shrimp, is sometimes found living in these pouches; so that even this simple digestive apparatus is not free from intestinal worms. The discolored spots occasionally observed in the pouches of the *Sarracenia* have been supposed to indicate serious disorganization, and the powerful and rapid decomposition of food, when taken in too great abundance, has been fancifully likened to indigestion from repletion, and then the occasional offensive odors may perhaps be symptomatic of vegetable dyspepsia. (Burnett op. cit. p. 290.)

moist sand and comminuted shells; but it is, probably, only in order to derive nourishment from the innumerable animalculæ and remains of organized matter so abundant in it.* The stomach of many of these invertebrated animals is provided with a thick, tough, coriaceous epithelial lining, to protect it from the dense inorganic substances taken along with their food. (Vide. Outlines of Comparative Anatomy, by Robert E. Grant, M. D., F. R. S., etc., London, 1841, pp. 329, 331, 343, 366, 376. Also, Lectures on the Comp. Anat. and Physiology of the Invertebrate Animals, by Richard Owen, F. R. S., etc., London, 1843. *Passim*.)

Such being the *general* and broad distinction between the vegetable and animal kingdoms, as indicated in the sources of nutriment, it is certainly an extraordinary physiological phenomenon that *Geophagists* should be found among *men*,—the highest in the scale of animal organization.

Geophagy, as a habit, prevails chiefly among savage tribes inhabiting the intertropical regions. Alexander de Humboldt has recorded some highly interesting observations on this singular physiological phenomenon as presented to him in the tropics of South America. The Otomacs, a tribe of Indians inhabiting the mission of Uruana on the Orinoco river, were found to swallow every day, during several months, very considerable quantities of *earth*, *without injuring their health*. They belong to those most uncivilized *nations of the savannas*, who have a decided aversion to cultivate the soil, and live almost exclusively on hunting and fishing. They are men of very robust constitution; but ugly, savage, vindictive, and passionately fond of fermented liquors. They are *omnivorous animals* in the highest degree; and, therefore, the other Indians, who consider them as barbarians, have a common saying, “nothing is so disgusting that an Otomac will not eat.” While the waters of the Orinoco and its tributary streams are low, they subsist on fish and turtles. At the time of the periodical inundations of the Orinoco, which last two or three months, it is extremely difficult to procure fish, and the Otomacs are in the habit of swallowing a prodigious quantity of earth. The clay is kneaded into balls, called *poya*, of from five to six inches in diameter. M. M. Humboldt and Bonpland found heaps of these

* The stomach of the *Siren lacertina*,—a species of *perennibranchiate* reptile, having only one pair of feet, which inhabits the Southern States, is usually found to contain little else than *mud*. (Vide. Annals of the Lyceum of Nat. Hist. of New-York, vol. 1, Part 1st, p. 53. 1821.

balls in their huts, piled up in pyramids three or four feet high. The Otomacs do not eat every kind of earth indifferently;—they display considerable epicurean skill in selecting the alluvial strata that contain a *very fine and unctuous clay*, remarkably smooth to the feel,—of a yellowish gray color. Being slightly baked in the fire, the hardened crust has a tint inclining to red, owing to the oxide of iron which is mingled with it. When about to be used, these clods are moistened afresh, and each individual consumes daily, during several months, *three quarters of a pound* of clay slightly hardened by fire, *without any sensible effect on the health*. (Vide. Personal Narrative of Travels to the Equinoctial Regions of the New Continent, during the years 1799–1804. By Alexander de Humboldt and Aimé Bonpland. Translated into English by Helen Maria Williams, vol. 5, Part 2, p. 639 et seq. London, 1821.) No trace of the mixture of an organic substance, whether oily or farinaceous, could be detected in the balls of *poya*, which Humboldt took to Paris. Neither is it *steatitic*; for, M. Vauquelin did not discover any traces of magnesia in it. He found, that it contained more silex than alumina, and three or four per cent. of lime. (Humboldt op. cit., vol. 5, p. 641–642.) When questioned concerning the nature of his subsistence during the two months when the Orinoco is the highest, the Otomac shows his balls of clayey earth. This he calls his principal food;—for at this period he can seldom procure a *lizard*, a *root of fern*, or a *dead fish* swimming at the surface of the water. But he does not the less regale himself with this species of aliment during the rest of the year. Every day in the season of drought, when fishing is most abundant, he scrapes his balls of *poya*, and mingles a little clay with his ordinary food. (p. 642–643.) What is most surprising is, that the Otomacs do not become lean by swallowing such quantities of earth: they are, on the contrary, extremely robust, and are far from having the abdomen tumid and puffed up. The missionary Fray Ramon Bueno, assured M. Von Humboldt, *that he never remarked any alteration in the health of the natives at the period of the great risings of the Orinoco*. (p. 648.) It has not, as yet, been possible to verify with precision how much nutritious vegetable or animal matter the Otomacs take in a week during the same period; but it is certain, that they attribute the sensation of satiety, which they feel, to the clay, and not to the wretched aliments which they occasionally take with it. M. Von Humboldt also “found some traces of this vitiated appetite among the Guamoes; and between the confluence of the

Meta and the Apure, where every body speaks of Geophagy as of a thing anciently known: (Op. cit., vol. 5, Part 2, pp. 639 et 640.)

The same distinguished traveller observed every where within the torrid zone, in a great number of individuals, children, women, and sometimes even full-grown men, an inordinate and almost irresistible desire of swallowing earth; not of an alkaline or calcareous character, to neutralize (as is commonly supposed) acid juices in the stomach, *but a fat clay, unctuous, and exhaling a strong smell.* It is often found necessary to tie the hands of children, or to confine them, to prevent their eating earth, when the rain ceases to fall. At the village of Banco, on the river Magdalena, he saw the Indian women who make pottery continually swallowing great pieces of clay. These women were not in a state of pregnancy; and they affirmed, that "*earth is an aliment which they do not find hurtful.*" (Op. cit. *supra.*, p. 643-644.) In other South American tribes *people soon become sick, and waste away* when they yield too much to this mania of eating earth. The same excellent authority informs us, that he found at the mission of San Borja an Indian child of the Guahiba nation, who was reduced to a lamentable state of atrophy in consequence of a disordered appetite, having refused during four months to take almost any other food than clay. Yet San Borja is only twenty-five leagues distant from the mission of Uruana, inhabited by that tribe of the Otomacs, who swallow the *poya* without experiencing any pernicious effects. (p. 644.) Father Gumilla asserts, that the Otomacs mingle the flour of maize and the oil of turtles' eggs with the clay, and that they purge themselves with the melted fat of the crocodile, when they feel any gastric obstructions; but the testimony of resident missionaries, as well as the inquiries of M. M. Humboldt and Bonpland, have failed to confirm either of the above assertions of this credulous traveller. As already remarked, the balls of *poya* which were taken from the winter stores of the Indians, contained no trace of animal fat, or of amylaceous matter. (Humboldt op. cit., vol. 5, Part 2d, pp. 642, 645, 657, et 658.)

In the Indian Archipelago, at the island of Java, between Sourabaya and Samurang, M. Labillardière observed little square reddish cakes exposed to sale. These masses, called *tana-ampo*, were cakes of clay, slightly baked, which the natives eat with appetite. (Voyage in Search of La Perouse. English Ed. vol. 2, p. 333. London. 1800.) According to M. Leschenault, (one of the naturalists of the Expedition to the Southern Lands, under the command of

Captain Baudin,) the cakes of earth which the Javanese are fond of eating, and which are sold in the public markets, are composed of a reddish and somewhat ferruginous clay, which is spread on a plate of iron, and baked. "This clay has a peculiar taste, which is owing to the torrefaction; it is very absorbent, and adheres to the tongue, which it dries. In general, it is only the Javanese *women* who eat the *ampo*, either in the time of their pregnancy, or in order to grow thin; the want of plumpness being a kind of beauty in this country. The use of this earth is fatal to health; the women lose their appetite imperceptibly, and no longer take without disgust a very small quantity of food; but the desire of becoming lean, and of preserving a slender shape, can brave these dangers, and maintain the credit of the *ampo*." (Letter from M. Leschenault to M. de Humboldt on the kind of Earth which is eaten at Java, as cited by Humboldt, op. cit. vol. 5, Part 2, p. 647.) Even in the most highly civilized countries this habit is frequently voluntarily induced,—particularly among exquisitely fashionable ladies,—by a vain desire of improving the beauty of the person, of giving a graceful slenderness to the form, or a languishing fairness to the skin, through the medium of chalk, vinegar, slate pencils, and other empirical materials.* Without pretending to pass judgment on a subject so delicate as the complicated elements which are brought into harmonious action by the all-subduing manifestations of feminine charms; I am rather inclined to think that, the leanness and etiolation, which is thus induced by the consequent supervention of a chlorotic state of the system, *is any thing but attractive to the opposite sex!* Among the Greeks,—who seem to have distanced the most ambitious modern dandies in supperiness as well as in Epicurism,—this practice appears to have been more common than even in our own day, and this too, among young men as well as young women; in consequence of which, their physicians gave to this variety of the disease the name of *malacia*, *softness*, or *effeminacy*.

M. Labillardière informs us that the savage inhabitants of New-

* Dr. H. Nims has given an account of the death of a girl 17 years of age, from eating large quantities of *slate-stone*, of which she passed nearly a pound, in a short time, by enemata. On dissection, the slate was found lining the intestinal canal, from the stomach to the rectum, and in the stomach near the pylorus, was discovered a perforation about the size of a goose quill, with the usual marks of inflammation, evidently caused by a sharp portion of the slate. (Boston Med. et. Surg. Journ., vol. 25, p. 11.)

Caledonia, eat great pieces of a friable steatite or *lapis ollaris*, which were of a greenish color, very soft, and twice as large as a man's fist,—to appease their hunger in times of scarcity. (Voyage in search of La Perouse, English Ed., vol. 2, p. 213–214 : London, 1800.) M. Vauquelin analyzed specimens of the earth which were transmitted to him by Labillardière. It was soft to the touch, composed of small fibres, which were easily separated, and when incinerated lost about four per cent. of its weight. He found it to consist of—

Magnesia,	37
Silex,	36
Oxide,	17
Water,	04
Lime and Copper,	03
Loss,	03

100

From which he concluded that it does not contain any alimentary quality, and can only be considered a kind of mechanical expedient to suspend the pains of hunger. (Vide. Notice of M. Vauquelin's paper read before the Philomatic Society of Paris, in *Tilloch's Philosophical Magazine*, 1st Series, vol. 11, p. 281 : London, 1802.)

Goldberry had seen the Negroes in Africa, in the islands of Bunck and Los Idolos, eat an earth, of which he had himself eaten, without being incommoded by it, and which also was a white and friable steatite. (Goldberry's *Voyage en Afrique*, vol. 2, p. 455, as cited by Humboldt, p. 648.) The Negroes on the coast of Guinea delight in eating a yellowish earth, which they call *caouac*. The slaves who have been taken to America try to procure for themselves the same enjoyment ; but it is constantly detrimental to their health. They say "that the earth of the West Indies is not so easy of digestion as that of their country." Thibaut de Chanvalon, in his voyage to Martinico, expresses himself very judiciously on this phenomenon. "Another cause," says he, "of this pain in the stomach is, that several of the Negroes, who come from the coast of Guinea, eat earth ; not from a depraved taste, or in consequence of a disease, but from a habit contracted at home in Africa, where they eat, they say, a particular earth, the taste of which they find agreeable, *without suffering any inconvenience*. They seek in our islands for the earth most similar to this, and prefer a yellowish red volcanic tufa. It is sold secretly in our public markets ; but this is an abuse which the

police ought to correct. The Negroes who have this habit are so fond of *caouac*, that no chastisement will prevent their eating it." (*Voyage à la Martinique*, 1763, p. 84, as cited by Humboldt, loc. cit. p. 646.)

M. M. Humboldt and Bonpland saw at Popayan, and in several mountainous parts of Peru, *lime* reduced to a very fine powder, sold in the public markets. This powder, when used, is mingled with *coca*, that is, with the leaves of the *erythroxylum peruvianum*. Indian messengers frequently take no other aliment for whole days than lime and *coca*. In other parts of South America, on the coast of Rio de la Hacha, the Guajiros swallow lime alone, without adding any vegetable matter to it. They always carry with them a little box filled with lime, as some more civilized men do snuff-boxes, and as in Asia people carry a *betel* box. It has been conjectured that, the lime may be used for the purpose of blackening the teeth; as in the Indian Archipelago, as among several American hordes, black teeth are esteemed highly ornamental. According to the same observer, in the cold regions of Quito, the natives of Tigua eat habitually from choice, and without being incommoded by it, a very fine clay, mixed with quartzose sand, suspended in water. Large vessels filled with this milky water, which serves as a beverage, were found in their huts. (Humboldt op. cit., vol. 5, Part 2, pp. 648, 649.) It is well known that the water of the Mississippi river,—which is usually surcharged with mud and dirt to the extent of nearly one fourth of its bulk,—forms a favorite and healthy drink with our Western people.

The banks of the McKenzie river, a few miles above the Bear Lake, contain layers of a kind of unctuous mud, which the Indians in that neighborhood eat occasionally during seasons of scarcity, and also take it even at other times for an amusement. (Vide. Food and its Influence on Health and Disease, by Mathew Freeman, M. D.; London, 1842, p. 67.) It is known, that great use is still made in the East of the solar and sigillated earthenware of Lemnos, which are fat, unctuous, aluminous clay, mixed with oxide of iron. The German workmen employed in the quarries of sandstone worked at the mountain of Kiffhauser, spread a very fine clay upon their bread, instead of butter, which they call *steinbutter*, stone butter; and they find it singularly filling, and easy of digestion. (*Freiesleben, Kupferschiefer*, vol 4, p. 118. *Kesler*, in *Gilbert's Annalen*, B. 28, p. 492, as cited by Humboldt, op. cit. vol. 5, Part 2, p. 654.) According to

Pliny, the Romans invented a broth or porridge called *Alica*, which was made out of a grain resembling spelt, which was also called *Zea*. In order to make the *Alica* white and tender, it was mixed with chalk from the hills between Naples and Puteoli. (Nat. Hist. xviii., 7, 10, 11, 29.) Mr. Medhurst informs us that, the Chinese use great quantities of sulphate of lime, (gypsum,) which they mix with pulse, in order to form a jelly, of which they are very fond. (China, its State and Prospects, p. 38: London, 1836.) The *fossil farina*, which, according to Stanislas Julien, (*Comptes Rendus*, 1841, 2 Semest, p. 358,) is used in China, in times of great scarcity, as a food, contains 13.2 per cent. of organic matter, (Payen, *ibid* p. 480. Vide Pereira's Treatise on Food and Diet, Am. Ed., by C. A. Lee, New York, 1843. p. 4, note.) The earth called *bergmehl*, or flour of the mountain, which has been employed at Degerfors, on the frontiers of Lapland, in times of scarcity, admixed with flour and the bark of trees, has been shown by the microscopic researches of Prof. Retzius to consist of the fossil remains of nineteen different forms of infusoria with siliceous carapaces, yielding twenty per cent. of animal matter by incineration. (Poggendorf's Ann., B. 29, p. 261, as cited by J. Müller, in his Elements of Phys., Am. Ed. Philadelphia, 1843. p. 328. Also, Truman, op. cit., supra., p. 67.) In view of such examples as the above mentioned, Dr. Trueman has been led to affirm that, "all edible earths most likely contain portions of organic matter, which is the reason of their being taken as food" (op. cit. p. 67);—an assertion directly at variance with the analyses of M. Vauquelin, who could detect no organic matter either in the balls of clay eaten by the Otomacs, or in the steatite consumed by the New Caledonians.

Dr. James Copland once saw a robust seaman, who occasionally would devour a whole wine or ale glass, having previously crushed it in small pieces with his teeth, and yet no bad effects resulted, at least for many months afterwards. (Lond. Med. Repos., vol. 1, 7.) The only other instance on record, where this dangerous feat has been performed, is given by Camerarius. (Memorab. cent. 5.) (Vide. Copland's Dic. of Practical Med., Am. Ed., Art. *Appetite*, vol. 1, p. 123.) Indeed, the Ephemerides of Natural Curiosities from Ovid, through Darwin's Zoonomia, down to the *Dictionnaire des Sciences Médicales*, abound in examples of *pantophagists* or *polyphagous monsters*, who have swallowed clasp-knives, musket bullets, stones, billiard balls, gold watches, and Louis-d'ors: and, what is still more

singular, generally passed them through their callous digestive tubes a few days afterwards. In the case recorded by M. Fournier, in his *Cas Rares*, the stomach of a galley-slave became gradually enlarged into a warehouse of all sorts of marine stores. But these remarkable instances of *pantophagy* do not come within the same category with the habits of *Geophagy* which I have noticed; for they are comparatively rare,—are confined to isolated individuals,—and, so far from being prompted by the cravings of a natural appetite, are usually nothing more than exploits of reckless hardihood.

In the Southern States, *Geophagy* prevails to a considerable extent, particularly among the Negroes, in whom the habit is frequently indomitable, and almost invariably proves fatal, unless broken before the morbid symptoms are manifested. I have before me the Notes of a case of a Negro girl, aged seventeen years, who was probably more or less addicted to this pernicious habit from childhood. General swelling and emaciation supervened, attended with loss of appetite, difficulty of breathing upon the slightest exertion, drowsiness, inactivity, and general debility,—despondency, with fondness for solitude, together with the characteristic white and pallid appearance of the nails, palms of the hands, and the soles of the feet,—the peculiar bloodless, translucent and blanched hue of the inside of the lips, gums, tongue, and lining membrane of the mouth, and glossy state of the *tunica adnata*, with other signs of depressed vital power and deficient assimilation. The cause of her difficulty being suspected, and being now confined to her bed, a strict guard was kept to prevent the indulgence of the vitiated appetite, while the certainty that a continuance of the habit would inevitably result in death, was strenuously urged upon her attention. But nothing could prevent the gratification of the invincible craving for earthy substances;—for the cunning plans of the patient to procure her desired repast, eluded the utmost vigilance. She at length sank under the joint influences of extreme debility and inanition. After death, *a ball of clay as large as a man's fist, and partly eaten, was found under the bed-clothes!!* There appears to have been a complete arrestation of the reproductive functions. In her general appearance, she presented the characters of a *girl of only twelve years of age*;—there was no augmentation of the mammæ,—no manifestation of a catamenial discharge, or any other indications of puberty!

According to Dr. Joseph Pitt, *Geophagy* prevails endemically among the poor white people, as well as the negroes, in North Caro-

lina, along the borders of the Roanoke river. (New-York Med. Repos., 2d Hexade., vol. 5, p. 340 : N. Y., 1808.) I have frequently observed the same habit among the poorer classes of white persons, inhabiting the pine barrens and thinly settled portions of Georgia. The influence of example, especially among children, doubtless contributes materially to the perpetuation and extension of this pernicious habit, when once established in a community. The endemic affection, called *Dirt-eating*, *Mal d'Estomac*, *Cachexia Africana*, etc., so well described by John Hunter, George Davidson, James Dancer, John Ferguson, and other writers on the diseases of the Negroes of the West Indies, as well as by Prof. W. M. Carpenter of Louisiana,—appears to be the entailment of a habit contracted in Africa. Whether the conjecture of Thibaut de Chanvalon, previously alluded to, that the indulgence of the habit in Africa, is *not pernicious to health*, be tenable or not, we have not the means of determining with certainty;—but there are facts as well as analogies, which throw considerable probability on the opinion. I have already noticed the fact, that among some savage tribes, Geophagy is *not fatal to health*.

According to M. Moreau de Jonnès, it has been supposed to be observed, that the inordinate taste for eating earth augments among the African slaves, and becomes more pernicious, when they are *restricted to a regimen purely vegetable*, and deprived of spirituous liquors. (Obs. on the Dirt-eaters of the West Indies. *Bullet. de la Soc. Méd., Mai*, 1816, as cited by Humboldt op. cit., vol. 5, Part 2d, p. 645.) With regard to the influence of spirituous liquors, my observation does not furnish me with the data requisite for giving a decided opinion; but I am quite sure, that a liberal supply of *animal food* has, in many instances, removed the malady, and that a continuance of its use has, apparently, contributed much towards the eradication of the habit from many plantations. Such a *permanent* effect could be scarcely ascribed to a mere *change of diet*.

No physiological phenomenon being entirely insulated, it may be interesting to examine several analogous phenomena, which present themselves in other departments of the animal kingdom. Kirby, the distinguished entomologist, informs us that he found the larvæ of the *Dermestes vulpinus*, Fabr, feeding on a specimen of *amianthus*, and perforating it in various directions, and that they underwent their customary metamorphoses. As this class of insects is not particular in selecting a place in which to undergo their metamorphoses,

it is not probable that they would have taken the trouble to perforate the asbestos for that sole purpose:—but a further proof that this was not their object, is furnished by the varying size of the holes perforated in the specimen. There were three, one of which was one and a half lines in diameter; another, one and three quarter lines; and a third, two lines:—from whence it seems to follow that the insects that perforated it were in different stages of growth; and consequently derived nutriment from that substance.” (Vide. Tilloch’s Phil. Mag., 1st Series, vol 61, pp. 3 et 4: 1823.) A large Spider of the species *Aranea scenica*, Linn., has been supposed to be capable of obtaining nutriment from devouring *sulphate of zinc*. Two ounces of this salt were closed up in a box with the spider, of which it was found, at the end of ten weeks, he had eaten a considerable quantity. At the time the paper was read, the insect seemed in perfect health, having in about six months eaten nearly four ounces of the sulphate of zinc. Other metallic salts,—sulphates, muriates, and nitrates, were also offered to the spider, but he would not touch them, even when denied his favorite salt. From some experiments made on the yellowish brown powder found at the bottom of the box, the author concludes that the sulphate of zinc had been deprived of a part of its acid in passing through the spider. (Tilloch’s Phil. Mag., 1st Series, vol. 53, p. 61: 1819.)

Assuming that, in the instance recorded by Kirby, the *Dermestes* had the power of resolving the amianthus into its ultimate elements, let us inquire what were the sources of nutriment of this insect. According to the analysis of Meitzendorf, asbestos consists of—

Silica,	55.869
Magnesia,	20.334
Lime,	17.764
Protoxide of Iron, . . .	4.309
Prot. Manganese, . . .	1.115

99.391

(Vide. James D. Dana’s System of Mineralogy, 2d Ed., New-York, 1844, p. 370.) If we grant these coleoptera the *extraordinary* power of appropriating from the atmosphere, carbon in the form of carbonic acid,—nitrogen either alone or in the form of ammonia,—oxygen,—and hydrogen in the form of aqueous vapor,—*perhaps*,—with the assistance of the elements of amianthus,—we will be furnished with materials sufficient for the nutriment, growth, and metamorphosis of

them. But the *Aranea* which luxuriated on sulphate of zinc, must have been provided with still more extraordinary powers of assimilation;—for the sources of his nutriment were attenuated to the elements of that salt, viz: sulphur, oxygen, and zinc,—together with the materials furnished by the atmosphere. Great caution should, however, be observed in generalizing from instances drawn from the lower orders of animals, and especially from insects, with regard to the sources of nutriment. The mere air, or that in conjunction with the impurities usually suspended therein, appears to afford nourishment enough for many forms of animal life. Snails and chameleons have often been known to live upon nothing else for years. The scorpion has been known to endure an abstinence of three months, and the *Melasoma*, one of the beetle tribe, has lived seven months pinned down to a board. Garman found that this nutriment is sufficient for the support of the voracious spiders; and M. Latreille confirmed the experiment by fixing a spider to a piece of cork, and precluding it from any communication with every kind of food for four months; at the end of which period he appeared to be as lively as at first. Mr. Baker in like manner confined a *Scarabæus* beetle under a glass for three years; allowing him nothing but air for diet: at the expiration of this period, he was fortunate enough to effect his escape, and go in pursuit of a more substantial repast. Every entomologist repeatedly sees insects living in their cases, although pinned down for an incredible length of time. I have frequently observed several of the larger species of *Elatér* to survive the transfixing of a pin for many months. It is a well-established fact in the history of fishes, that many species will live and thrive upon water alone in a marble basin; although, it seems probable, that they may obtain some nutriment from organic impurities, and from the numerous animalculæ which the microscopist reveals to us in the purest forms of rain-water. Bruce kept two *cerastes* or horned snakes, in a glass jar for two years, without any apparent food; and they cast their skins at the usual period. Lizards, toads, frogs, and many other reptiles of the batrachian family, have dragged out anchoritic lives of indefinite duration, imbedded in trunks of trees, and blocks of marble; cut off from every kind of food except the moisture by which perhaps they are surrounded, and the indirect communication of air through the pores and crevices, which the experiments of W. F. Edwards have demonstrated to be essential to the maintenance of life in such circumstances. Hence it is very clear, that, it is possible

that the Dermestes and the Spider above-mentioned, might have lived without any ostensible nutriment, and might have consumed the amianthus and the sulphate of zinc as a matter of amusement, without abstracting any nourishment therefrom :—although it must be confessed, that the varying size of the perforations and the regular metamorphoses which the insects underwent in the example recorded by Kirby, as well as the alteration of the physical characters of the salt of zinc which had passed through the spider, appear to indicate that these minerals subserved some more substantial purpose in their *unique* system of dietetics.

Like man in a savage state, some animals also, when pressed by hunger in winter, swallow clay or friable steatites; such are the wolves in the north-east of Europe, the reindeer, and, according to the testimony of Patrin, the kids of Siberia. The Russian hunters on the banks of the Jenisey and the Amour use a clayey matter, which they call *rock-butter*, as a bait. The animals scent this clay from afar, and are fond of the smell; as the *clays of bucaros*, known in Portugal and Spain by the name of odoriferous earths, have an odor agreeable to women; especially to those of the province of Alentejo, who have acquired a habit of chewing it, and feel a great privation, when they cannot indulge this violated taste. (Humboldt op. cit., vol. 5, Part 2, pp. 655, 656.) My uncle, Maj. John Le Conte, F. L. S., of New-York, has kindly furnished me with the details of an extraordinary example of *canine Geophagy*, which fell under his own observation. This bitch, when very young, nearly killed herself by eating the skin of boiled ham, and was ever after more or less troubled with indigestion. She remained in New-York until she was half grown, when he brought her to Georgia, where she killed herself in about eighteen months, by *eating clay*. Although she was a remarkably large dog, and lived three years, she manifested no disposition to breed, and never had any offspring. Her appearance was always rather lank, notwithstanding she belonged to a variety distinguished for stoutness and a tendency to be corpulent. She was very robust, but seemed incapable of getting fat. The kind of clay which she preferred, and which, it is believed, is always selected by every *amateur* Geophagist, was a white clay which could be obtained in the sides of newly-dug ditches and had a slight aluminous taste. He likewise informs me, that in the mountains of North Carolina and Tennessee, he has seen horses, horned-cattle, and hogs, eat a kind of red clay, strongly impregnated with iron, which is not unfrequent in

that part of the country. The natives ascribed the habit to an inadequate supply of salt. Whether this practice was injurious to them, or whether it ever degenerated into a disease, he was not able to ascertain.

It is an unquestionable fact in the history of the crocodilian reptiles, that *fragments of stone* are frequently found in their stomachs. Humboldt and Bonpland dissected a crocodile eleven feet long, at Batalley, on the banks of the Rio Magdalena, the stomach of which contained fish half digested, and rounded fragments of granite three or four inches in diameter. (Op. cit., vol. 5, Part 2, p. 656.) M. Geoffroy-Saint-Hilaire met with a quantity of small pebbles in the stomach of the Egyptian crocodile, "*the polish of which announced that they had served for the trituration of the alimentary matters.*" (*Annales du Museum d'Histoire Naturelle*, No. 7, as cited in Tilloch's Phil. Mag., 1st Series, vol. 16, p. 440-441: 1803.) Mr. Richard Owen also found them in a *Crocodilus acutus*, Cuv., which died at the Gardens of the Zoological Society. (Phil. Mag., New Series, vol. 11, p. 63: 1832.) I have repeatedly taken stony masses of various sizes from the stomachs of our Alligators, (*Crocodilus lucius*, Cuv.); and, in one case, an Indian arrow-head of hornstone was extracted, which was as *beautifully polished as though it had been in the hands of an accomplished lapidary*. The savages of South America believe that these indolent animals like to augment their weight, that they may have less trouble in diving; while the inhabitants of Ceylon and Luconia, seem to have a superstition that the reptile swallows "a stone whenever he kills a human being, as if to keep account of his misdoings." (Silliman's Journal, vol. 38, p. 319-320: 1840.) The two prevailing opinions are, either, that these *sauria* swallow stones only when they are going into a torpid state, for the purpose of keeping up the action of the stomach during the period of hybernation;—or, that it is to appease hunger in times of scarcity, by exciting an abundant secretion of gastric juice. But I am disposed to think, that the true object in swallowing the inorganic masses, is, to provide these animals with the means of accelerating the trituration of the aliments in a muscular and thick stomach; as the crustacea, insects, and many gasteropods, are furnished with gastric teeth;—and as the granivorous birds take small pebbles, to assist mechanically in the reduction of the food. The teeth of these reptiles are exclusively *prehensile organs*; consequently their food is swallowed without mastication, requiring some other mechanical

power to reduce it to a mass fit for assimilation. The stomach of this class of reptiles, like that of several phytophagous Chelonia, resembles that of granivorous birds, in the thickness of its coats, and the approximation of its two apertures. Its muscular character and gizzard-like form, had long drawn attention to the analogy which it bears to the true gizzards of birds; but the propriety of this denomination has been questioned by M. Geoffroy-Saint-Hilaire, on the ground of its wanting a cuticular lining. In a young Alligator (*Croc. lucius*, Cuv.) which I dissected during the past spring, I found that viscus in the form of an ellipsoidal, strong muscular gizzard,—the villous coat being remarkably thick and highly vascular;—the muscles do not form a digastric mass as in gallinaceous birds, but the muscular fasciculi radiate from an anterior and posterior central, shining, circular, tendinous part to the margins, as in many species of cephalopoda and rapacious birds. In short, the absence of an epithelium appears to be the only reason for withholding from this viscus the function of a true triturating organ; while the muscular character of its parietes, and the polished condition of the stony masses found therein, would seem to indicate that it does actually perform that office in the economy of this class of reptiles, without the protection of a cuticular membrane.* According to this view of the question, therefore, these *sauria* cannot, properly speaking, be regarded as Geophagists.

When we reflect on the whole of the facts connected with the phenomena of Geophagy, we perceive, that this disorderly appetite for clayey, magnesian, and calcareous earth, is most common among the inhabitants of intertropical regions; that it is not always a cause of disease; and that some tribes eat earth from choice, while others (the Otomacs in America, and the New-Caledonians in the Pacific Ocean,) devour it to appease hunger, and to give bulkiness to the meagre supply of organic food which they can obtain in times of scarcity.

That the habitual indulgence of an appetite, apparently so un-

* It is somewhat remarkable that Prof. Rudolph Wagner affirms,—contrary to the observations of Geoffroy-Saint-Hilaire and Owen,—that, the stomach of the Crocodile is "*lined with a hard epithelium.*" (Elements of the Comp. Anat. of the Vertebrate Animals. Edited from the German, by Alfred Tulk: London, 1845, p. 162.) A re-examination of the specimen taken from an Alligator, which I have preserved in spirits, *does not* show any appreciable development of a cuticular membrane distinct from the villous tunic.

natural, *should not always result in the induction of a pathological state of the system*, is certainly an extraordinary physiological phenomenon. Our knowledge of the physical and chemical properties of the different kinds of earth which are eaten by various tribes of savages, is not sufficiently accurate to admit of a definite conclusion, with regard to *what constitutes the deleterious qualities of some, and the innocuous character of others*. I am disposed, however, to ascribe the diversity of effects, in a great measure, to the difference in the *mechanical states* of the kinds of inorganic materials which are swallowed. A careful review of the facts above collected, will show that those tribes which indulge their Geophagous propensities *with impunity*, always *select a fat, smooth, and unctuous magnesian or aluminous earth*; the mechanical condition of which, is precisely such as would be least liable to produce gastric or intestinal irritation. The clay consumed by the Otomacs without any perceptible injury to health, which was analyzed by M. Vauquelin, appears to have been a silicate of alumina and lime, analogous to that resulting from the decomposition of feldspar,—possessing all the characters of a fat, unctuous variety of clay. The steatitic masses swallowed by the savage inhabitants of New-Caledonia, seem to be a silicate of magnesia mingled with the oxides of calcium and copper,—presenting the same smooth, unctuous character. The white friable steatite which Goldberry observed the Negroes on the coast of Africa to eat, and of which he had himself eaten, without being incommoded by it, was probably a serpentine or talcose variety of stone. Substances so smooth and unctuous would not probably cause any gastric or intestinal irritation; even were they to pass unchanged through the whole length of the alimentary canal.

On the contrary, it is not at all astonishing, that the ferruginous clay called *ampo*, which the Javanese women eat, should produce emaciation and loss of appetite; since it is probable, that the angular silicious particles mixed with it, would speedily occasion some visceral disturbance, merely from the mechanical irritation which the presence of such materials must develop. Still less remarkable is it, that the Negroes of the West Indies, who had been in the habit of eating *an unctuous steatite* on the coast of Africa *without experiencing any inconvenience from the diet*, should speedily become sick when they consume the rough *volcanic tufa* of these islands.

A variety of physiological phenomena prove, that a temporary cessation of hunger may be produced, without the substances that

are submitted to the organs of digestion being, properly speaking, nutritive. This observation has been confirmed by the direct experiments of two distinguished French physiologists, M. M. Hippolyte Cloquet and Breschet. After long fasting, they ate as much as five ounces of a silvery green and very flexible laminar talc. Their hunger was completely satisfied, *and they felt no inconvenience* from a kind of food, to which their organs were unaccustomed. (Humboldt, op. cit. vol. 5, Part 2, p. 653.) Indeed, the experiments of Dr. Beaumont and others, have demonstrated that *bulkiness* of aliment, is almost as necessary to healthy digestion, as the presence of nutrient matter itself. It is, probably, from this cause, that the Kamschatdales and the Veddahs, or wild hunters of Ceylon, mix earth or saw-dust with their train-oil and honey. Hunger is appeased, the painful feeling of inanition ceases when the stomach is filled. In vernacular phraseology, this viscus is said to stand in need of *ballast*; and every language furnishes figurative expressions, which convey the idea, that a mechanical distention of the stomach causes an agreeable sensation. We may readily conceive, that the secretion of the gastric and pancreatic juices is augmented by the presence of earths in the stomach and intestines of the Otomacs:—but how does it happen, that such abundant secretions, which, far from furnishing the body with new matter, only produce the elimination of substances already acquired by other means, do not at length cause emaciation and exhaustion? M. Humboldt thinks that “It can be attributed only to a habit, prolonged from generation to generation.” (op. cit. p. 655.) The influence of habit is, without doubt, very powerful:—we are able gradually to change the regimen of herbivorous and carnivorous animals, to feed the former with flesh, and the latter with vegetables. Spallanzani habituated an eagle to live on bread, and a pigeon on flesh. (*Expérience sur la Digestion*, c. 74, et. 75.) Sometimes a long deviation from the natural food is followed by a change in the structure of the digestive organs: thus, Hunter found that after a sea-gull has lived for a year upon grain, the strength of the gizzard is vastly increased. (vide. Home. Comp. Anat., vol. 1, p. 354.) It is asserted that, the domestic cat, which eats bread as well as flesh, has an alimentary canal considerably *longer* than that of the wild-cat; thereby presenting an approximation to the herbivorous mammalia in the structure of the digestive apparatus. (vide. Good’s Study of Med., Doane’s Ed., vol. 1, p. 24, New-York, 1836.) Like many animals, man can accustom himself to extraordinary

abstinence:—but we can scarcely ascribe to the effects of a habit progressively acquired, the power which the Otomacs possess, not only of living, *but of enjoying vigorous health*, with no other apparent subsistence, during two months of the year, than masses of silicate of alumina and lime! Assuredly it is more rational to suppose, that the life of indolence and the almost complete cessation of muscular exercise, which these savages have associated with the periodical overflows of the Orinoco, enables them to be supported on the comparatively insignificant amount of organic matter which is occasionally taken with the clay. This view is strengthened by the consideration, that in intertropical regions, where the temperature of the surrounding atmosphere is high, but a small amount of the elements of respiration is consumed in the function of calorification; and during the period of muscular inactivity, where there is very little manifestation of mechanical force, a comparatively scanty supply of materials is sufficient to maintain an equilibrium between the supply and waste of matter in the system;—especially when it is taken in conjunction with other matters, which, while they afford little or no nutriment to the body, yet serve to give that *bulk* to the aliment, which is one essential condition of active and thorough assimilation.

It cannot be doubted, that the great mass of substances, inservient to the nourishment of man, is obtained from the animal and vegetable kingdoms; but there seems to be no sufficient reason for excluding those articles of the mineral world that are necessary for the due constitution of different parts of the body. Most of these inorganic elements enter into the constitution of the *proteinaceous* compounds of animals and vegetables, as well as into other organic aliments, in sufficient quantity to supply the wants of the system. When they are not thus furnished in adequate quantities, it is by no means unreasonable to suppose that they will,—when presented in a form suitable for assimilation,—be appropriated *directly* from the mineral kingdom. Such a deficiency of the mineral ingredients of the aliments, may be the cause of the prevalence of Geophagism among certain tribes of savages. I do not now speak of the vitiated appetite for inorganic substances, manifested as a symptom of derangement of the function of digestion, but of the habit as it prevails among apparently healthy individuals. All of the edible earths contain more or less *lime*,—an element essential to the proper nourishment of the osseous structures.

The essential constituents of the human body are thirteen—viz : carbon, hydrogen, oxygen, nitrogen, phosphorus, sulphur, iron, chlorine, sodium, calcium, potassium, magnesium, and fluorine ; and the same, therefore, must be the elements of our food. Several of them are required in such minute amounts, that considerable time must elapse before their want is manifested by derangement of the animal economy ;—but it seems certain, that no one of those primary or simple substances can be wanting in the nutriment without the body ultimately feeling the ill effects of its absence. From experiments on the nutrition of a calf, and a cow in calf, M. Boussingault concluded that there is a portion of the mineral substance taken in with the food, which remains definitively fixed, to concur in the growth or in the evolution of the individual. In an adult animal, it is to be presumed, that no such definitive fixation of inorganic principles takes place, or that it is much less considerable. Nevertheless, it would be a grave mistake to suppose, that an adult animal could go on for even a very short period of time, upon food that contained no mineral matter. Precisely as in the case of organic matter, it appears that a portion of inorganic matter is also fixed in the living frame, where, for a time, it forms an integral element in the wonderful structure ; and a supply of the latter kind is undoubtedly no less necessary, than is the supply of the former description recognized by all the world. (Vide. *Rural Economy, in its relations with Chemistry, Physics, and Meteorology ; or, Chemistry applied to Agriculture.* By J. B. Boussingault, Member of the Institute of France, etc. Translated by George Law, Agriculturist : Am. Ed., New-York, 1845, p. 410 et seq.) Were there an inadequate quantity of phosphoric acid, of lime, etc., in the aliment, no question but that the body would speedily feel the effects of the deficiency, and that disease and death would eventually put an end to existence. So much, indeed, seems demonstrated by the very interesting experiments of M. Chossat, in which he kept granivorous animals upon a diet rich in azotized principles and in starch, but deficient in lime. From previous inquiries, M. Chossat had observed that pigeons even require to add a certain proportion of lime to their ordinary food, the quantity naturally contained in which, does not suffice them. Wheat, though it contains a large proportion of phosphate of magnesia, yields very little phosphate of lime ; and pigeons fed on this grain, though they do perfectly well at first, and even get fat, begin after a while to fall off. In from two to three months, the birds appeared to suffer from con-

stant thirst; they drank frequently; the fæces became soft and liquid, and the flesh wasted, and in from eight to ten months the creatures died under the effects of a diarrhœa, which M. Chossat attributed to *deficiency of the calcareous element* in the food. And it is neither uninteresting nor unimportant to observe, that the same thing occasionally occurs in the human subject during the period when the process of ossification is usually most active. But one of the most remarkable features of M. Chossat's experiments was observed in the state of the bones of the pigeons;—they became so thin and weak that they broke during the life of the birds with the slightest force. (Chossat, in *Comptes Rendus*, tom. 14, p. 451, as cited by Boussingault, op. cit., p. 413.) From these instructive experiments M. Boussingault very justly concludes, that “supplies of all the elements of all the parts of the body are indispensable to the maintenance of health, to the continuance of life.” (loc. cit.) A pigeon will eat about 463.140 grains of wheat per diem, containing 9.725 grains of ash, in which analysis discovers 4.569 grains of phosphoric acid, and 0.277 of a grain of lime. But this small quantity of lime is incompetent to maintain the bones in their standard condition. (Boussingault, op. cit., p. 413.)

The importance of the inorganic principles of food, has not been sufficiently recognized:—it is not only indispensable that the allowance of an animal in full growth be adequate to support, and even to add to the soft textures;—it must further contain the elements requisite for the nutrition of the osseous system. While the ashes of wheat contain about 2.85 per cent. of lime, that of maize or Indian corn grown at Bechelbronn, yields, according to the analysis of M. Letellier, but 1.3 per cent. of *lime*, to 50.1 of phosphoric acid, and 17.0 of magnesia. (Vide. Drs. Will and Fresenius on the Inorganic Constituents of Plants, in *Phil. Mag.*, 3d Series, vol. 25, p. 517. 1844.) Very probably the amount of lime contained in maize, may vary considerably, according to the character of the soil in which it is grown; but the foregoing analysis seems to indicate, that this grain usually contains *less* of it than wheat. Hence, M. Boussingault remarks that, “in South America, where the animals have it largely, I have observed that they frequently *eat earth*.” “The habit,” he continues, “which certain tribes of the natives have of eating earth, too, which has been particularly remarked upon by travellers and missionaries as an instance of depravation of taste, presents itself to me in quite another light, since I became acquainted with the

composition of the ashes of the ordinary article of diet (maize) in the countries where it occurs." (Op. cit., p. 414.) The calcareous and other salts necessary to nutrition are, however, not derived from the food exclusively; the water that is generally consumed contains a quantity which is by no means to be neglected. Liebig seems to think, that the habit of eating calcareous substances observed among children, arises from an insufficient quantity of lime in their diet:—the validity of which assertion, is questioned by Pereira, on the ground that there is no evidence to prove, that in these cases the food is deficient in its ordinary proportion of lime. (Vide. Pereira, op. cit., ante. p. 37.)

In confirmation of the importance of inorganic principles in the food, I will here adduce a remarkable fact which has repeatedly fallen under my own observation. The cows which live on the extensive savannas and pine barrens lying on the North side of the Altamaha river in McIntosh county in this State, subsist upon very coarse species of grasses, which are probably deficient in some of the phosphatic or calcareous ingredients essential to healthy nutrition; for these animals are constantly observed to *chew bones*:—frequently remaining stationary for several hours,—with the head elevated at an angle of forty-five degrees to prevent the saliva from escaping from the mouth,—they will, by constant trituration, gradually reduce the bony mass to a very small size, when it is rejected as an unmanageable morsel. The cattle in this section of the State are usually rather lean; and cows brought from the fertile plantations in the neighborhood,—if allowed to subsist on what they can procure in the savannas and pine-barrens,—in the course of a year or two, become equally thin, and ultimately fall into the habit of *eating bones*. I have not been able to ascertain whether these animals indulge in this habit to a *greater extent* when they are in a state of *pregnancy* and when they are giving *milk*; but it appears reasonable that the increased demand for mineral matters under such conditions of the economy, would call for a proportionate supply. The intelligent instinct which prompts these animals to seek for a diet so extraordinary, must originate in an inadequate supply,—in their impoverished aliment,—of some of the inorganic principles (probably the phosphatic salts) essential to a proper nourishment of the osseous structures. The above-mentioned fact confirms the justice of the observation of Prof. J. F. W. Johnson, who recommends upon *theoretical* grounds, that bone-dust or *bone-meal* be introduced as an article of general

food, for growing and pregnant animals, with a view of supplying the large quantity of the phosphates required for increasing the osseous system of the one, and for the healthy evolution of the fœtus in the other. (Op. cit., *ante*. pp. 603 et 605, Part 4.)

Such being the importance of mineral elements in the animal economy, it does not appear either extraordinary or very astonishing, that the dogs, geese, and other animals, which M. M. Magendie, Tiedemann and Gmelin fed exclusively on sugar, or gum, or starch and distilled water, should have gradually become extremely emaciated and eventually died of inanition; or that the unfortunate Dr. Stark should have fallen a victim to a system of *exclusiveness* in diet. It is scarcely to be expected that animals could subsist for any length of time, on aliment which did not contain *all* of the constituents of their bodies,—which could not repair the waste of the system. The necessity for *variety in diet* so clearly illustrated by the experiments of M. M. Magendie and Burdach, is very probably owing to a deficiency of one or more of the *inorganic principles* in the alimentary substances which were given to the animals. Some articles of food contain an inadequate quantity of some salts, which are supplied by others;—and thus arises the necessity for *variety in diet*. In *milk* nature has furnished a product perfectly adapted to sustain and develop the young animal:—it contains all of the proximate principles necessary for the increase of the soft textures, and, likewise, all of the saline ingredients required for the consolidation of its bones.

Every fresh discovery in Organic Chemistry brings vital phenomena more within the grasp of physical laws, and, in so far, more within the provinces of exact research. We have yet to learn what *chronic diseases* are produced by restricting individuals to a diet deficient in certain inorganic principles which are indispensable to healthy nutrition. The importance of a good allowance of chloride of sodium in the food, is universally acknowledged; but the influence of the phosphates, of the salts of lime, magnesia, potassa, iron, etc., has not been sufficiently investigated. Certainly it is not an irrational conjecture to suppose, that the Geophagous propensity manifested by certain tribes of savages,—not as a vitiated appetite resulting from a nervous lesion of the function of digestion, but as an uncontrollable *habit*,—maybe owing to a deficiency of some of the saline ingredients in their ordinary food, which nature prompts them to supply in this remarkable manner. This view derives confirmation from the fact, that an indulgence of the appetite, *does not* always produce disease. Might

not a due admixture of *bone-meal* with maize and other kinds of aliment, afford a cheap, efficacious, and *palatable* mode of furnishing the saline materials required in the reparation of the osseous structures? Might not such a plan contribute greatly towards the eradication of the *Cachexia Africana* from the Southern and Western States?

Man can never devise a system of dietetics which will embrace but *one single alimentary principle*, for the obvious reason that his body is composed of a number of such elements. It is highly amusing to notice the great attention with which some persons regard the veriest trifles in diet, and the hopes which they entertain of the advantages to be derived from strict constancy in some particular style of self-management. Some, like Sanctorious, measure with scrupulous accuracy the prescribed quantity of their ingesta,—while others, like Bouleau, religiously abstain from sitting near the fire, lest peradventure it should dry up their radical moisture. Notwithstanding all this, man is not made to last forever:—it is scarcely reasonable to imagine that he will ever, in the language of Dr. Fletcher, “instead of sitting down, as at present, to his pound and a half of mutton chop and pot of porter, will swallow for his dinner a fine grain pill composed of equal parts of ovine and cerevisine, or some such matters of which science has yet to be delivered;”—but rather, that all attempts to work miracles on himself, and render him unsusceptible of disease, must be forever frustrated, and that he must always continue to exist, the same “poor, bare, forked animal” that he was originally created. Savannah, June 25th, 1845.

ARTICLE II.

A Remarkable Case of Volvulus and Strangulation of the Intestines within the Abdomen. By JAMES M. GORDON, M. D., of Lawrenceville, Ga.

It is to be regretted that comparatively so few cases of mortality have a place assigned them in our medical journals, notwithstanding many of them might be productive of unusual interest. A large majority of physicians who write, very naturally, entertain a predilection to report those cases only which have terminated in *remarkable*

cures, or at least successful issues; to the utter exclusion of those of an opposite character, however advantageous to the medical profession. The following case, although it may avail but little practically, may not prove wholly unacceptable to the pathologist.

D. P. C., of Gwinnett county, aet. 35, a respectable planter, and a man of uncommon strength and vigorous health, was attacked on the 18th of May last with the most excruciating pains in the abdomen, which were attended with obstinate constipation of the bowels. As he was supposed to be laboring under an attack of colic, various domestic remedies were administered without effecting the slightest abatement of pain, or relief to the confined bowels. A Thompsonian physician of the neighborhood was requested to see him, and who had charge of the case for the subsequent week, but without affording any relief. My partner, Dr. Russell, and myself, were then requested to visit him, and found him the subject of most violent paroxysms, of pain in the abdomen, with partial remissions of comparative ease. The skin was cool, tongue coated with a dark brown fur, pulse nearly natural, bowels constipated. Upon further examination it was discovered that considerable pain and tenderness were evinced from pressure upon the lower dorsal and lumbar vertebræ. Local revulsives were freely applied to the spinal column; opiates and antispasmodics were then administered, which had the effect to allay all pain. An active cathartic was now retained till about the time catharsis should have been produced, when the pain returned with its full force of intensity. Laxative enemata were given in such quantity as to distend the whole colon, but all to no purpose, the stricture not being removed. The pain soon gave place to a death-like sickness at the stomach, pallid countenance, cold extremities, surface bedewed with a cold clammy perspiration, followed by vomiting of an abundance of stercoraceous matter very offensive to the smell. The most energetic means were adopted for his relief—yet nevertheless without averting the fatal result of this unfortunate case. For the few last days such remedies were used as were best calculated to allay pain and support the sinking powers of nature. He continued to grow worse and expired in the most intense agony at 8 o'clock, P. M., of June 1st, thirteen days after the attack.

Post mortem appearances twelve hours after death. On opening the abdomen the ileum exhibited a dark red (almost black) appearance, which extended through all of its coats, and also to the mesentery. Upon examination it was ascertained that an *introsusception*

of about an inch and a half in length existed about four inches above the termination of the ileum. So firmly had the coats of the intestine become agglutinated that they presented the appearance of a fleshy tumour, blocking up its entire caliber. It was also observed that the ileum had made a complete revolution upon itself, with the peritoneum as an axis, so as to strangulate a knuckle of intestine five inches in length. The first point of strangulation was immediately above the intorsusception, and the second twelve inches above the last. They were twisted around each other so as to form a *knot* which was with difficulty relieved after the morbid specimen had been removed from the body. The incarcerated noose of intestine presented an almost black color, and was greatly distended with gas. About twenty inches of intestine were involved in the congestion. The points where the intestine passed around itself were of a dull white color, presenting a striking contrast with the surrounding parts.

Remarks. The above case presents several interesting peculiarities:—*First*, the complicated nature of the disease; *secondly*, its length of duration; *thirdly*, the attendant symptoms. So far as our information at present extends we believe there has been no case in which intorsusception complicated with a *linking* of the intestine so as to produce an additional cause of strangulation has been recorded, although instances of either of the obstructions separately are upon record. The most remarkable circumstance in relation to the case is the great length to which it was protracted, and in our mind it can be accounted for in but one way, and that is by the supposition that the intorsusception was the *original* obstruction, and the knotting of the intestine a *secondary* lesion, and a consequence of the great increase of peristaltic motion of the intestines produced by the active cathartic medicines administered or otherwise by the violent commotion of the contents of the abdomen in the efforts at vomiting. A pretty conclusive evidence of the fact, that the intorsusception must have existed from the attack, is the firmness with which adhesions existed between the intestinal folds—so perfect that the different layers could be but very indirectly traced. It is but reasonable to suppose that the intorsuscepted portion was not entirely deprived of circulation, or the process of gangrene and sloughing, which was slowly progressing, must have advanced much more rapidly. On the contrary, the knot was so firmly made as to exclude all circulation, and the noose of strangulated intestine actually in a state of incipient gangrene which could have only existed for the space of a few days,

otherwise death must have ensued at a much earlier period. A remarkable fact in regard to the symptoms is, that there was no vomiting (except after a cathartic had been administered) throughout the course of the disease. Had not the secondary lesion supervened, it is not impossible but that there would have been sloughing and a discharge per anum of the invaginated portion of intestine, and a spontaneous yet complete cure.

ARTICLE III.

Jasminum Revolutum in Syphilis. By J. M. GARDNER, M. D., of
Fort Gaines, Ga.

The *Jasminum Revolutum*, commonly known as the Yellow Jasmine or Jessamine, is found in great abundance throughout the United States. Its active principle resides in the root, particularly the young root, which should be gathered in the spring.

The medicinal properties of this plant are very imperfectly understood. When taken in a large dose, it produces the usual effects of narcotics; such as stupor, convulsions and death.

In some cases of scrofula, I have used the Jasmine with success. The late Dr. Garbel, of Columbia, Alabama, experimented very largely with it, particularly in paralysis, but with what success, I am unable to say. But it is chiefly in diseases of a syphilitic character that it has been successfully employed.

The treatment of syphilis with yellow jasmine, was known and practised among the Indians living on the Chatahoochie. An Indian negro, who had become celebrated among them for curing this disease 'with roots,' is said to have made the profession acquainted with its medicinal virtues. Dr. Johnson and the late Dr. Brown used it in syphilis, and have spoken favorably of its powers. In the hands of the latter it was signally successful. In my own practice, the action of the jasmine has proved more effectual, where the system had been first prepared by the administration of pil. hydrarg. until the gums were slightly touched. But Dr. Brown, I believe, used it without any previous preparation of the system by mercurials.

While under the influence of the jasmine, the patient should remain within doors, exposure to the sun producing vertigo and loss of

sight. He should also abstain from greasy food, since it counteracts the effect of the medicine upon the disease, without lessening the danger to be apprehended from an over dose.

In cases of poisoning with the jasmine, we are induced from its narcotic properties, to employ the same antidotes as are directed against an excessive dose of opium. I know of only three cases of poisoning with this article: one terminated in convulsions and death, the other two were relieved by prompt medical aid.

The form best adapted for use is that of tincture, prepared by taking of the jasmine root and cross vine, each a pound, proof spirits half-gallon. Cut the roots into small pieces, and macerate for twenty days in a warm place.

The dose for an adult is from five drops gradually increased to a teaspoonful.

In applying the yellow jasmine to the treatment of syphilis, I have been guided by no other data, but what were gleaned from the Indians. I added the pil. hydrarg., which seemed to render the system more susceptible to its influence. I hope that those who have a wider field of labor than has fallen to my lot, will test its properties, for I feel assured that when they are better known, the yellow jasmine will obtain a place among the articles of our materia medica.

PART II.—REVIEWS AND EXTRACTS.

Essays on Pathology and Therapeutics, being the substance of a Course of Lectures delivered by SAM'L HENRY DICKSON, M. D., Professor of the Institutes and Practice of Medicine, in the Medical College of the State of South Carolina. Charleston: 1845. 2 vols. 8 vo.

The well established reputation of Professor Dickson, cannot fail to secure to the work before us an extensive circulation throughout our country, and particularly in the Southern States, where the author's abilities and professorial eloquence have long been familiar to the profession. The first treatise on the Practice of Physic which has emanated from a Southern pen, it will necessarily find a place in the library of every Southern practitioner, and be regarded as the exponent of Southern views in Medicine. We will naturally turn

to it for light, especially on the forms of disease most peculiar to our latitude, and cannot but be disappointed if we find it at all lacking on these topics, however full it may be on others. We are aware that a preface is rarely read, yet it not unfrequently, as in the present instance, deserves attention as an index of what may or may not be expected in the body of the work. The author, after stating that he has been repeatedly solicited to publish a "complete and systematic Treatise on the Practice of Medicine," adds: "But, I have now, neither (not?) the ambition to attempt the task, nor do I imagine, that the advantage to be attained by its performance, would be, in any degree, commensurate with the sacrifice of time and labor which it would demand." The confession is candid—yet may lead to the regret that one who has ambition enough to publish so extensive a work, and professional lore in abundance, should not have had sufficient ambition to make the work "complete."

The ten first chapters of the work are devoted to general considerations on the causes of disease, malaria, animal putrefaction, contagion, endemics, epidemics, seats of diseases, tendency of disease, symptomatology, diagnosis and prognosis. These several subjects are treated in the usual felicitous style of the author, and in an off-handed manner remarkably well adapted to their want of minuteness and sometimes of accuracy. The following quotation will illustrate this observation:

"Amidst the rank grass of Africa, the lion couches, and her forests resound with the roar of her beasts of prey. The jungles of India nourish the elephant and the tiger, and the thick foliage shelters innumerable tribes of apes and serpents. In the swamps and bays of America, the panther and the wild cat seek their food, and the deer hides himself from the red Indian and the hunter. Animal as well as vegetable life, luxuriates in heat and moisture; hosts of reptiles crawl abroad in the mud of each slimy pool, and countless insects sport in every sunbeam that glances from its surface. To man—to the white man alone, is this prolific combination unfriendly.

"But the structure and functions of the lungs and stomach are not obviously different in the black, or red, or tawny tribes; like the lower animals, they are chiefly distinguished from us anatomically and physiologically, by the peculiarities of the cutaneous integument. We account then, most readily, for their remarkable difference as to susceptibility of malaria impression, by reference to the structure of the skin, which would therefore seem to be the surface primarily acted on.

"It is true that negroes born and constantly resident in healthy positions, who have been housed and clothed delicately, will become

in a certain limited degree susceptible of miasmatic influences. It is possible, too, that animals long domesticated and carefully sheltered and tended, may take on a like susceptibility, though this is not well established. In this part of the world, where we have but too familiar an acquaintance with this subject, we are persuaded that our negroes are comparatively little—our flocks and herds not at all, liable to malaria diseases.”

It may be that negroes are, in the neighborhood of Charleston, “comparatively little liable to malaria diseases.” Such is however far from being the case in Georgia and in the upper districts of South Carolina, as will be attested by every planter. It is well known that one of the greatest objections to the settlement of our most productive lands, is the fact that a large number of the hands who till them are disabled by fever at the very time when they are most needed in the cotton fields. We are not prepared to admit even that the fatality of fevers is less in the black than in the white race. We hesitate not to express the belief that by statistical researches, it will be demonstrated that there is but little, if any, difference either in liability or fatality between the two races under similar circumstances of exposure, regimen, &c.

We fully concur with the author in the following views :

“Of these (intestinal worms) there are several varieties, whose generation within the body is altogether unaccountable, and forms one of the most plausible instances, among those alleged by philosophers, of the spontaneous development of life and organization. The lumbricus or round worm, so familiarly known to parents and nurses, is indeed very rarely wanting in the bowels of children, and is frequently met with in the alimentary canal of the most vigorous adults. Parr, Rush and several other physicians, have regarded them, on account of their uniform presence, as intended for some useful or salutary purpose in the animal economy; perhaps aiding in the removal of effete portions of the food taken. I am by no means disposed to coincide in these views, although I believe that they very often bear the blame of occasioning diseases in which they have had no share. I do not believe them to be capable of producing any specific form of disease; but they give impulse and efficiency to a great number and variety of morbid influences. By inordinate increase of number, they impair the constitution, preventing the free and due performance of the functions of the intestines, whose surface thus takes on a diversity of modes of irritation. Even when present in moderate number, they may become, by a change in the condition of the mucous tissue of the digestive canal, sources of severe additional excitement and disturbance.”

It is indeed too frequently the case, especially with the unprofessional, that diseases of a serious nature are overlooked in the anxiety to get rid of worms. That their presence may aggravate certain affections of the bowels and stomach, cannot be denied; but that they often occasion disease is extremely questionable. It is a matter of daily observation that children in the enjoyment of fine health will pass large numbers of worms on the administration of anthelmintics. This especially obtains among the negro children of our plantations, who are unusually robust. There is a circumstance in connexion with this subject that we do not recollect to have seen alluded to by any writer, viz., that worms endeavor to escape from the alimentary canal on the supervention of fever of any kind, and that they are not, unfrequently, passed off lifeless if this state of the system have existed for some days previous. How common it is to see worms working themselves out of the rectum and even the stomach, during febrile disorders of children, although their total number may prove to be very small by the subsequent administration of the most certain vermifuges. This may serve to explain the popular disposition to attribute almost every attack of sickness in children to the presence of worms. That extraordinary numbers of worms may exist in the alimentary canal without producing any appreciable impairment of health, is, as already hinted, well established.

We need offer no apology for introducing the following very handsome and appropriate extract on a subject worthy of attention:

"Would to Heaven that the good sense of mankind would lead the civilized and christian nations to resume the ancient classical practice of burning the bodies of the dead. There is surely something shocking in the very idea of inhumation. It is, I confess, revolting to my own mind in the highest degree, to remember that custom dooms me

"To lie in cold obstruction—and to rot!
This sensible, warm being to become
A kneaded clod!"

"But there is a much better argument than that derived from mere feeling, against the mode now universally practised in disposing of the human corpse. Upon the funeral pile we reduce to a heap of innocent dust, that which in a few days will be changed into a mass of putrefaction, tainting the air and spreading around it, if not taken far away, horror and pestilence. What matters it that we are at present able to remove it to such a distance, and to hide it so completely that it affects our senses neither of sense nor smell; although we have not succeeded, if we may believe the statements of several respectable writers, Walker and Chadwick among them, in obviating the deleteri-

ous influences of its putrefaction upon the living, who breathe the neighboring atmosphere affected by it. The mere concealment of the decaying remnants of mortality, will not always be in our power. The 'city of the tombs' is already more crowded with inhabitants, than the busy streets of Constantinople; the catacombs of Paris, and the cemeteries of London, are filled to overflowing. Nay, certain facts stated recently, with regard to the burial grounds of two of the cities of this new world, would lead us to doubt whether similar evils were quite so distant from our apprehension, as might have been imagined, from the comparative sparseness of population in our immense extent of territory.

"How much better, then, for the cold and clammy clay, and the noisome grave-yard, to substitute the polished vase, the marble urn—in which we may preserve deposited, the relics of 'all that our souls held dear,' and dwell upon the remembrance of our friends with emotions of tender melancholy, mingled with no gloomy ideas of recoiling disgust. Their ashes may thus become the inmates and the ornaments of our habitations; and their constant presence may serve to over-awe us from what, being evil, would have been frowned upon by them when living, and to encourage us to those good actions, which we feel, would have deserved and met with their approbation."

Prof. Dickson's nosological arrangement comprehends seven divisions or classes—viz: 1st. Dis. of the Circulatory System; 2d. Dis. of the Digestive System; 3d. Dis. of the Respiratory System; 4th. Dis. of the Sensorial System; 5th. Dis. of the Motory System; 6th. Dis. of the Generative System; 7th. Dis. of the Excretory System. Under the first of these divisions we find the various forms of fever—intermittent, remittent, yellow, catarrhal, typhus, typhoid, pneumonia, symptomatic. Without commenting upon the propriety of the above arrangement, we hasten to more practical matters. On fever, in general, the author expresses himself thus:

"You will not expect from me any additional attempt at promulgating a theory, or striking out a definition of this Protean disease; and I cannot describe it to you better than by a familiar quotation from Fordyce, which with all its simplicity and quaintness, is often referred to as conveying more truth than is to be found elsewhere in the same brief limits.

"'A fever,' says Fordyce, 'is a disease that affects the whole system; it affects the head, the trunk of the body, and the extremities; it affects the circulation, the absorption, and the nervous system; it affects the skin, the muscular fibres, and the membranes; it affects the body and likewise the mind. It is, therefore, a disease of the whole system, in every kind of sense. It does not, however, affect the various parts of the system equally and uniformly; but on the

contrary, sometimes one part is much affected in proportion to the affection of another part.'

* * * * *

"I shall not hesitate to retain the long established distinction of fevers into Symptomatic and Idiopathic. My senses and my reason both recognize an obvious difference between the febrile disorder consequent upon, and produced by, a wound of soft parts, dislocation of a joint, or fracture of a bone, and that which, however apparently analogous, arises without the occurrence or manifestation of any notable accident, or evident change previously affecting the body, or any of its parts; and there seems to me little risk of confounding exanthematous fever, and that which is connected with inflammation of the pleura, or of the brain, with any of the numerous types attributed to malaria, and offering at their invasion no constant injury of a special organ, but rather dividing (as in the faithful sketch from Fordyce) its disturbing influence over the whole constitution. Notwithstanding these points of separation and contrast, however, which seem to afford safe and broad ground for a rational diagnosis, the weight of modern authority is decidedly in favor of considering all fevers as symptomatic—the extension of general irritation and disorder from some local affection. There is much dispute, however, as to the point of local origin. Clutterbuck fixes it in the head, and regards fever as nothing more than the secondary or constitutional result of inflammation of the brain and its membranes. Broussais attributes it to an inflammatory irritation of the mucous tissue of the digestive tube, and especially the stomach. With vastly more plausibility others have rejected these exclusive theories, and considered all irritated and inflamed organs, as centres from which may radiate the different modifications of fever. Thus Professor Marcus finds in the brain the original irritation upon which typhus is generated; in the lungs that of hectic; in the trachea, that of catarrhal fever, etc.

"I am not disposed to pursue this discussion, and shall therefore hazard but one remark farther on this point so warmly disputed. It is highly probable that no cause of disease possesses such indefinite extent of impression, as to act at once upon more than a single part; and besides, it is consistent with all analogy to suppose that every cause of disease is determined to, and fitted to act specifically, or at any rate specially upon one organ or tissue. It follows, therefore, or it is highly probable, that all disease is, to speak with logical precision, local in its origin.

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"We may conclude here this brief discussion of the general subject of fever, with an enumeration and cursory description of its consequences, or the effects of febrile disorder upon the several organs of the body assailed in its progress, as manifested in examinations post mortem.

"The brain rarely fails to present the signs of vascular engorgement, and very often shows the results of inflammation in greater or

less degree in either of its substance or membranes. This occurs so generally that inflammation of the brain and membranes is considered by a pretty numerous class of physicians with Clutterbuck at their head, as the true proximate cause of fever. Numerous facts have been brought forward to establish this conclusion, which has been very plausibly advocated, and much ingenious reasoning employed to explain away the difficulties and exceptions adduced by its opponents.

"Analogous marks of lesion in the mucous membrane of the stomach and intestines, have occasioned this tissue to be in a similar manner selected as the seat of an inflammatory irritation alleged to be the proximate cause of fever, or rather fever itself, for such is the doctrine of Broussais and his followers. Nor do the other abdominal and pelvic viscera escape during the tumults of this pervasive malady; though as we shall hereafter inform you more in detail, they exhibit these disturbances rather in derangement or suspension of their functions than in any material alterations of structure. Yet we can observe occasionally not only engorgement but inflammation with its results in the liver, spleen, kidneys and bladder.

"The respiratory organs also suffer in fever, though not so generally or in so striking a degree as the viscera above spoken of. Pulmonary congestion is often one of the early symptoms of the attack, but in a majority of instances it undergoes a spontaneous solution during the successive changes of action and determination.

"It is admitted that these local febrile affections are usually of the nature of inflammation, or display an almost irresistible tendency to run promptly into that condition. The opinion certainly derives strong support from the phenomena exhibited in fatal cases of protracted duration. In these we almost invariably meet with inflammatory disorganization. On the other hand, it is contended that these are incidental and not essential results, as they are not found to take place in the most violent attacks if they terminate unfavorably after a brief course. Here no lesions are discoverable. In still more numerous instances we find the determinations to and affections of particular parts to be clearly and simply congestive, and these are among the most mortal and malignant of febrile modes of derangement. Still farther, it seems to me reasonable to regard many if not most of the determinations that occur in the course of an ordinary attack of fever as simply irritative, in contradistinction to inflammatory and congestive conditions of parts. The numerous head-aches, spinal and muscular pains, and gastric oppressions and annoyances connected with fever at particular stages or periods, subsiding rapidly and often disappearing altogether when these stages are past, are, I should think, clearly of this character. In different seasons, climates and localities, and in different types of fever, we find these several local affections differing notably. Some of these variations appear to be incidental, while others are uniform and essential, occurring in masses and showing little respect to individual peculiarities of constitution.

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"Here we find a majority of the lesions presented, in the viscera of the abdomen. The mucous membrane of the stomach and intestines very rarely escapes injury in cases protracted to any length.

"The next greatest number is of the cerebral affections, and these are met with in attacks that prove rapidly fatal, and such as run into a typhous state. Comparatively few lesions of the pulmonary organs take place in our genial climate, and though not absolutely confined to the winter season, usually occur during cold weather."

We have thus drawn largely on the author, in order to place before the reader, in his own language, Prof. Dickson's views. We do not object so much to what is expressed, as to what has been omitted. Indeed, unless we can find enough of Pathology in these quotations, we need look no farther, for, strange as it may appear, we have in vain sought for it under the heads of Intermittent and Remittent fevers. The interest at present excited with regard to the pathology of these fevers is such, that as soon as the work was placed in our hands, we immediately turned to the chapters treating of them, in order to ascertain the views of so distinguished a Southern practitioner. But to our utter surprise we found not a syllable on the subject of Pathology! In the chapter on Intermittents, the five or six first pages furnish us with symptomatology, causation, and prognosis. The treatment is then taken up and occupies the remaining fourteen pages. The chapter on Bilious Remittents comprehends about forty-two pages, equally barren on the important subject of Pathology. Why this extraordinary silence? Can it be possible that the teacher thinks it of too little consequence to occupy the attention of the youthful and inexperienced student, (for it must be remembered that these pages contain the substance of a Course of Instruction to a Collegiate Class,) or, what is still more improbable, can it be that the learned author has no fixed views on the pathology of such common affections? Foiled in our expectations on this point, we turn to the *treatment* of Intermittents and Remittents, and find, in relation to their most potent antidote, the following language:

"Thus you will hardly venture upon the exhibition of cinchona, when the apyrexia is imperfect, and where there are present obvious marks of local disorder of some important organ. The continuance of headache, gastric oppression, abdominal pain and tension—these symptoms demand farther general or preliminary treatment.

* * * * *

"Bark, in all its modes of preparation, even the sulphate of quinine, is generally regarded as inadmissible whenever the apyrexia is

notably incomplete, and when there are any prominent affections of important organs. To such cases, fortunately, sulphur is perfectly well adapted, and in such I have often found it productive of the most obvious and lasting benefit.

* * * * *

"The obvious analogy of the remittent with the malarious intermittent, and of the remission of the former with the apyretic stage of the latter, long since suggested the employment of cinchona in protracted instances of autumnal fever of the present type. The practice is becoming more and more common to resort to some one of the preparations of this powerful febrifuge in the better and more marked remissions. Nay, some practitioners regarding quinine with Bell as a sedative, do not wait long for an opportunity of this sort, but administer it generally after premising such depletory measures as may be demanded. As yet I cannot but look upon both the theory and practice as uncertain, yet the experiment deserves to be cautiously made. If the sulph. quinine in ordinary doses be offensive to the stomach, however, or determine to the head as it will sometimes do, with pain, dizziness, tinnitus aurium, I would desist and fall back upon the less impressive but safer course already pointed out."

It is truly to be lamented that a work, destined to be the guide of many young practitioners, should inculcate such obsolete principles. We had thought it, long since, an acquired fact in practice, that quinine could be given with impunity, not only during an *intermission* but also during a *remission* of our "malaria fevers," as the author terms them. We have never known it to act otherwise than beneficially under such circumstances, and this is the experience of all who have used it similarly. Having been for a number of years convinced that the sulphate of quinine exerts rather a sedative than a stimulating effect on the system, that it blunts the nervous sensibilities, and, regarding our Intermittents as well as Remittents as primarily located in the nervous system, whose derangement may lead to disorder in other organs, we have always made it a point to restore the nervous system to a normal state, as early as our services were required, and by so doing to arrest the development of the secondary phenomena. This can always be done with entire safety by the application of revulsives to the spine, and the free use of quinine during the periods of intermission or remission, without regard to the condition of the system or of any particular organ. We are aware that, even now, most practitioners hesitate to administer quinine in cases presenting a predominance of gastric or of cerebral affection. Our case book bears unequivocal testimony of the fallacy of such hesitation.

Having neglected the study of the Pathology of "malaria fevers,"

and misapprehended the effects of quinine, the author, instead of arresting the disease at once, still adheres to the routine treatment, such as it was practised ten or fifteen years ago. We find no allusion made to revulsive applications to the spine in Intermittents, and a mere incidental reference to them in Remittents.

"While the sensorial energies are active, and the vascular excitement high, the pain and inflammation of a blister will probably add more to the general irritation of the disorder than will be compensated for by its revulsive impression. But when the case is protracted beyond a certain point, the former effects do not follow, or are of less relative importance—nay, the exciting as well as the revulsive influence of the epipastic becomes desirable. By the selection of proper periods, we may make this class of remedies, however, entirely safe, and far more valuable than if this be unattended to. If you use them chiefly as revulsives, apply them in the remission and in the vicinity of the organs you desire to relieve; to the epigastrium or side for the benefit of the stomach or liver; to the back of the neck or between the shoulders if the head be threatened; along the spine or on the sacrum to relieve congestion or irritation of the vertebral cord."

We have deemed it a duty to notice these omissions, because of the great advance made of late years in the Pathology and treatment of the class of affections we are most frequently called on to combat, and because we think it inexcusable in an author of such repute as Prof. Dickson, to have made no allusion to them, when so ably advocated by Maillot in his work on fevers, and by others in our country. We would refer with especial pleasure to an article on the subject, published as long ago as 1836, by Prof. Ford, in the 1st vol. of the Southern Medical and Surgical Journal, and which can scarcely have failed to meet the eye of so near a neighbor as Prof. Dickson.

In regard to the use of the lancet in Remittents, Prof. Dickson expresses himself thus :

"For myself, it is proper to avow, that in the practice of a quarter of a century, I have bled as few patients in bilious remittent as any physician who uses the lancet at all. I cannot presume to affirm, that I have always selected the cases proper for its employment, or that I have omitted none in which it was indicated; but the instances are very few in which I have been satisfied of my having derived any decided advantage from it; nor have I been disposed, in reviewing my course, to regret its omission in any."

The author advocates strongly, and we think very judiciously, cold affusion.

"The cold bath, one of the most ancient and universal remedies for fever, demands our early attention as specially indicated in the variety of it under discussion. The temperature of the season, the very nature of the attack, the symptoms present, the condition of the patient, are all such as to prepare us to expect from its employment the happiest results. Accordingly, I am disposed to rank it among the most efficient of our febrifuge measures here—far above the lancet both in the extent of its adaptation and in its degree of specific utility. All that we can hope or anticipate from bloodletting may be obtained in a majority of cases by the use of the bath, while the latter possesses this striking and obvious advantage, that we can repeat it as often as the symptoms are renewed that require it. Nor can I help expressing my surprise at the very limited resort of my professional brethren to it, when I consider how instinctively we desire it as a relief from the burning heat that oppresses us, and how certain and immediate a means it is of affording the relief.

"Of the three modes of employing it, namely, affusion, immersion and ablution, the first is the most impressive and efficacious, the last the least liable to objection or risk in doubtful cases. The particular indications which demand the resort to it unhesitatingly, are found in the youth and general vigor of the patient and the heat and dryness of the surface. The local determination which it controls most promptly is that to the brain, shown by headache, flushed face, red eye, delirium, etc., with a full, hard, bounding pulse. Seat your patient in a convenient receptacle and pour over his head and naked body from some elevation a large stream of cold water; continue this until he is pale or his pulse loses its fullness, or his skin becomes corrugated and he shivers. On being dried and replaced in bed, a genial sense of comfort and refreshment will attest the benefits derived from the process, which, as I said above, may be repeated whenever the symptoms are renewed which it is so well adapted to remove.

"If the shock of this shower bath or cataract be too great, immersion, which many prefer, may be substituted. Few shrink from this, and almost every one will evince the high gratification and enjoyment derived from it. One of the pleasantest effects following the bath, is the complete relaxation of the surface which it so often brings on, attended with a copious and salutary sweat. I need not warn you against the nearly obsolete practice of endeavoring to accelerate or increase this by wrapping in blankets or shutting up the apartment, or warming it artificially. The patient is to be covered agreeably to his sense of comfort; and though I would not place him in a current or draught of air, I would have his chamber fully and freely ventilated."

We find nothing in the volumes before us on Malignant Intermittents. The subjoined extract will show how summarily our author disposes of congestive fever, malignant remittent, and country

fever; forms of disease so interesting to Southern and Western practitioners.

"It would evidently be futile to attempt to lay down rules for the adaptation of details of treatment, to the several varieties of form, which under diverse circumstances and in different constitutions, may be assumed by our autumnal remittent. The principal of these is known, as I before said, by the title of "congestive fever." The specific peculiarity of this dreaded disease is the centripetal tendency of the fluids of the body, the consequent engorgement of the internal organs, and the general oppression and obstruction of the vital functions which result of necessity from this vicious condition of the circulatory mass. Some bold practitioners employ the lancet here as a revulsive, or for the purpose of resolving congestion; and the measure is certainly an efficient one, and as well adapted as in McIntosh's use of it in the cold stage of intermittents. It is full of serious risk, however, and I cannot venture to recommend it, though I can readily imagine cases in which it would be very likely to prove serviceable. And the same remark holds equally true as to cold affusion. A far safer course and equally promising, is the early resort to the warm or even hot bath, which often rouses the patient at once from his sullen languor, or relieves his sufferings from visceral engorgement. The free exhibition of the stimulant diaphoretics should follow, with assiduous application of external irritants, mustard and cantharides. Camphor or ammonia may be combined with our mercurial, and free doses of quinine administered. Indeed, our brethren of the south and west have placed their principal reliance, within the last few years, upon the sulphate of quinine, almost exclusively exhibited, and prescribed in immense doses. Congestive fever has been reported to have been successfully treated by doses of twenty to thirty, and even fifty grains of the remedy. I have heard authentically of an instance in which one hundred grains were given, in little more than twelve hours, and of another, in which half the contents of an ounce bottle were administered during a similar period. I have as yet met with no attack which required such enormous amounts. I will not dispute their necessity or propriety; of which indeed time and enlarged experience must constitute the true tests. Unless the drug, as thus employed, is strangely adulterated, evidence enough has been offered to prove that the danger of these large doses has been grievously exaggerated. Turpentine and capsicum are used freely here by many, and it is said with the best effect. The Dover's powder determines well to the surface, and, unless where there is coma, seems appropriate to our purposes. Many of these congestive cases resemble, from the first, or readily run into a typhoid condition, with abdominal irritation—diarrhœa, tenesmus, meteorism. I have found, in such instances, denominated in some parts of our State *ilietis*, the nitrate of silver productive of benefit. I prescribe the sixth or fourth part of a grain every three hours, without allowing it to interfere with such other remedial measures as may be indicated.

"In the malignant remittent, occasionally met with and formerly described to you, the vital forces, rapidly crushed by the overwhelming intensity of the morbid cause, fail apparently to exhibit any resistance or reaction. They must be sustained by every means within our power, while we have immediate recourse to our most impressive revulsives. The hot bath, sinapisms, vesicatories, must be quickly and assiduously applied, while we stimulate by the freest use of internal remedies, carefully selecting such as are best adapted to the circumstances presented. If, as is often the fact, the patient suffers severely from pain in the abdomen or chest, large doses of opium or morphine must be administered, while we keep up his sinking strength by brandy, ammonia or æther. In your diligent superintendence of such cases, make it a rule rather to incur the risk of over stimulating transiently, than fall below the requisite point of excitement in your use of stimulants. I am fully persuaded that I have seen more than one man die from the timidity of his physician in this respect; who, keeping at a cautious distance behind the disease, would not venture on the exhibition of any excitant adapted to the feeble excitability, until the vital energies upon which alone stimulants can act, had become worn out and exhausted.

"If the stomach will bear it, add to your formula some of the preparations of cinchona. The sulph. quinine in full doses will be often retained and do good. Alternate, combine, and recombine your stimulants, which may perhaps be aided also by warm and nutritious fluids, wine whey, arrow root with wine, wine alone or spiced, brandy with milk or in mucilage. These energetic agents will usually be found effective within a very short period, improving the pulse and arousing the general powers of the system. Yet you must not permit yourselves to be disheartened into inaction by their apparent inefficacy or slowness of impression. Persevere not only while there is a reasonable hope, but even after all hope seems extinguished; and though your hearts will now and again be wrung with painful disappointment, by the feebleness and inutility of your remedies, yet you will feel yourselves amply repaid by the gratification, which will not be denied you, of saving more than one fellow creature from the destruction which seems inevitably to await him. Instances of such recovery do occur, though rarely, and bear honorable testimony to the skill and unwearied humanity of the physician. They display too, the excellent powers of our medicaments, the capacity for endurance inherent in the human constitution, and show forth above all, the unspeakable benevolence of the former of these wonderful though frail frames.

"In the bills of mortality for the city of Charleston, you will find every year a certain number of cases distinguished by the appellation of 'country fever.' The phrase is employed to denote the febrile attack which follows within a short time, and with appalling certainty, an exposure to the concentrated malaria of the low country in our immediate vicinity. To sleep a single night upon his plantation,

involves the southern agriculturalist in the most serious danger ; nay, he is not safe if he indulge himself in frequent visits, even by day, to his rice fields, or inhale too often under any circumstances, the pestilential air of our swamps and marshes.

"Country fever, using the term as above defined, is a very instructive and interesting variety of fever, exhibiting in a very striking manner the tendency of the several types which have a miasmatic or paludal origin to mingle with or run into each other. Through the progress of a given case you may indeed have each of them in turn presenting itself. An attack commencing as intermittent, or single tertian, will thus become a double tertian, then a triple tertian, then a remittent of greater or less distinctness and regularity ; if successfully managed it may become again intermittent by restoration of the apyretic interval ; if otherwise it prove violent and tenacious, it is not rare to see it degenerate into that low and typhoid condition in which the remissions becoming irregular and uncertain, and indistinct, it approximates at least, if it does not assume the continued form.

"As early as May, in ordinary seasons, attacks of country fever follow the exposures above pointed out. I have known a few, even in April, ascribable perhaps, to some uncommon contingencies. The period of their appearance has, undoubtedly, a reference both to the temperature of the past winter and that of the advancing spring—a cold winter and a late spring being unfavorable to the invasion. Much also, is owing to the habits and constitutional predisposition of the subject exposed, who is especially liable to be assailed if imprudent or intemperate, or a subject of fever the year previous.

"It has been a long received opinion that a return to our comparatively healthy city atmosphere, the ordinary summer residence of so many planters, during the latent period which ensues after efficient exposure as above described, endows the coming attack in some obscure manner with a peculiar violence and malignity. The type assumed, as I have stated, is apt to be irregular, confused and complicated. We meet frequently with the *herosthesis* of the ancients, recognized, as I formerly mentioned, by Robert Jackson—an accumulation of unexpected paroxysms or exacerbations one upon another, or an exacerbation interposed at the most unlooked for period of the day, just when a remission was anticipated, and both patient and physician were congratulating themselves upon the prospect of a brief but solacing respite.

"It is a most insidious modification of fever, requiring to be watched with the greatest attention and assiduity. The sick man will often make little complaint, his symptoms will appear mild, and yet you will perceive that he gets steadily weaker and worse ; or the remission shall have become very distinct, nay, shall amount to complete intermission, and you flatter yourself with the hope that convalescence is become, when some single paroxysm shall intervene with such overwhelming violence, that prostration and fatal exhaustion ensue in a few hours.

"In the difficulty of accounting for this strange assumption of malignity under the circumstances, it has been argued that these modifications were determined by the peculiar state of the city atmosphere in relation to its capacity for producing the more pestilential grades of fever, as it is well known that cities are the exclusive sources of yellow fever and of the plague; and it is thus attempted to be explained why we also meet in the suburbs with similarly modified fevers. As regards Charleston Neck, the remark holds good—fevers originating in this mixed atmosphere very often partaking of the dreaded characteristics of country fever. But there is an insuperable difficulty in the way of this suggestion, in accordance with which we should find the bilious remittents of the city itself severe and fatal. The fact is notoriously otherwise. Here, they are indeed both infrequent and comparatively mild and manageable, as formerly stated to you.

"Besides this, a similar aggravation of violence and danger is affirmed to occur every where, when a subject efficiently exposed to the influence of febrific miasmata, has removed during the latent period to a pure and salubrious atmosphere. This is true, as Flint tells us, of the upland prairies of the far west, and as I have more than once had unhappy occasion to note, in our own lofty mountain regions.

"The prognosis in such cases you will at once infer to be very doubtful; nay, it is hardly safe to regard your patient as better until he is quite well.

"The treatment also requires to be managed with great diligence and nicety. Frequent visits are absolutely necessary, and with all possible watchfulness and assiduity, you will still be liable to fall into serious errors. It is exceedingly difficult to distinguish in the early stages the most unimportant attack from the most dangerous. Hence it has become my custom to look upon all such seizures with a jealous eye, and to institute from the commencement such a course of treatment as shall offer the best resources under any sudden development of malignity or aggravation of violence. Under these circumstances too, I watch anxiously for the first opportunity of administering some preparation of cinchona—the infusion in some of its combinations, or the sulph: quinine in proper and efficient doses. The system sinks so readily under such exacerbations or such accumulation of them as I have above alluded to, that I often venture upon the exhibition of this class of remedies, even in remissions somewhat indistinct and obscure, after the first vehemence of febrile action has passed by, and the appropriate measures of depletion have been premised.

"I have very rarely observed any evil results follow this practice; its worst consequence, if not most injudiciously timed, nor pressed obstinately against contra-indicating contingencies, will be an increase of violence in the next exacerbation; but to compensate for this, the succeeding remission will rarely fail to be more distinct and better adapted for the use of our febrifuge, and thus the disease is made to yield more readily than under any other course."

Chapter VII. treats of Yellow fever. The annexed corollaries contain the author's views of the generation of this disease.

"1st. This malady is the effect of a specific and peculiar cause.

"2d. In certain localities, this obscure cause is permanent and always active; in others, it exhibits only an occasional activity, by which alone its presence can be inferred. In Vera Cruz, Havana, Kingston, it is perennially endemic; it is occasionally so in New Orleans, Mobile, Savannah and Charleston; which last city seems to be placed upon its extreme northern limits of spontaneous production.

"3d. Its relation to season and temperature is equally well made out; being efficient only during the hot months of summer and autumn.

"4th. Yellow fever is contagious; in other words, a case of yellow fever having been generated in favorable season and locality, by its unknown and undetected cause, becomes itself a generating centre productive of other cases, or of a morbid agent capable of producing them.

"5th. It is transmissible from any one centre to another, or from any one of its generating centres to a healthy locality; and this communication or extension may take place in two modes,—either by conveyance of a portion of atmosphere in which is diffused its undefined specific cause, as in the hold of a foul vessel, from any place where it prevails epidemically; or by the introduction of a sick body or any fomites imbued with its contagion.

"6th. As a general rule, we may add that the contagiousness of yellow fever is limited by certain contingencies. This is Hosack's doctrine of contingent contagion; but the same circumstances limit the efficiency also of the generating cause, as indeed of all the alleged causes of yellow fever. Thus, high temperature is necessary to its production, existence and extension. No matter *how* it is generated, the fact is known that it does not exist any where in winter. Hence it follows, that if carried into a cold region from a hot one, it will not diffuse itself. An exception to this rule is said to have occurred in Halifax, N. S., whither the disease was carried from the West-Indies, in May; but the case is not satisfactorily made out."

We add Prof. D.'s opinion on the nature of black vomit.

"The majority at the present day regard it as a form of gastric hemorrhage. Warren, of Barbadoes, calls it "mortified blood." Bancroft says it is "merely effused blood altered in appearance and darkened in color by the gastric juice, or by some chemical decomposition. But this view is not altogether free from difficulties. The change of appearance is not accounted for, as we know it takes place in the vessels. We never meet with it in acknowledged hematemesis, the blood being always recognizable in that hemorrhage by its

proper qualities. Dr. Rhees, of Philadelphia, informs us that on instituting a series of observations with the solar microscope upon black vomit, he found it to contain innumerable animalculæ. A single drop exhibited many thousands, being indeed a mere congeries of them. When recent fluid was examined, they were alive and in constant motion; if suffered to stand awhile, and when taken from the dead subject, they were still and torpid. Comparative examinations were made of the discharges from the stomachs of patients ill with bilious remittent and other autumnal fevers, but no similar appearances were detected."

The author's treatment of Yellow fever consists principally of cold affusion, revulsives, and the free use of calomel as a cathartic, and with a view to the early establishment of complete mercurialization. His aversion to the use of venesection is thus summed up: "I repeat then, that while I propose to you no speculative objections against the lancet, and admit that circumstances may call for its occasional employment, the results of experience and observation are unfavorable to the general or frequent resort to it." The whole chapter is one of deep interest, although lamentably deficient in autopsic research and pathological considerations.

The limits assigned to this paper will not permit us to review the other diseases comprehended under the author's first division, and which complete the first volume. We therefore proceed to notice some of the contents of the second volume. Under the head of "Diseases of the Digestive System," we find the chapters on Dyspepsia, Gastritis, Enteritis, Milk-sickness, Colic, Cholera, Diarrhœa, Dysentery, Cholera Infantum, Helminthia, Hepatitis, Icterus, Splenitis, Parotitis, and Pharyngitis.

Affections of the spleen, although exceedingly common in our latitude, have hitherto received but little attention from the profession. Nor do we find any new light thrown upon them, or upon their treatment, by Prof. D. He makes the following concession in relation to the treatment of splenitis:

"For my own part, I cannot recommend any particular formula with great confidence, in this obstinate malady. I think I have found most benefit from the use of iodine combined with mercury, as in the deutiodide of mercury and potassium, while the patients' bowels were kept soluble by the employment of the blue pill with rhubarb in such doses as were requisite, never pressing this matter very far. Cups or leeches over the tumor relieve pain. Fomentations applied to the side are also useful."

It is to be regretted that the author's extensive experience has not led him to test the efficacy of the use of quinine in large doses, as recommended by the French. We have used it with manifest advantage in several cases of chronic enlargement of this organ.

Of the "Diseases of the Respiratory System," the author notices, Croup, Laryngitis, Bronchitis, Pleuritis, Pneumonia, Phthisis, Asthma, and Pertussis. We are much pleased with the stress with which is urged the exploration of the chest by physical means. The history of auscultation and percussion furnishes a strong illustration of the reluctance with which improvements are adopted, when industry is necessary to the appreciation of their merits. Although the great advantages of these physical means have been known upwards of a quarter of a century, and made an essential part of a physician's education in France, we still find that in our country, they are totally neglected by the great mass of practitioners. Indeed it is but a few years since they have been systematically taught in our medical schools. Justice requires, however, that we award to the Jacksons, to Morton, to Gerhard, &c., of our own country, the merit of having labored with successful zeal in the advancement of our knowledge of these means, and in the promulgation of their importance. Nor should we omit the claims of Drs. Cammann and Clark, of New York, who by the happy combination of simultaneous auscultation and percussion, have made the greatest improvement discovered since the days of Laennec. It is to be regretted that Prof. D. has not availed himself of their valuable publication (in the *New York Journal of Medicine and Surgery*, for July, 1840) in his remarks on the exploration of the heart. The author, however, is not singular in this neglect of improvements made at home. We do not recollect ever seeing the slightest reference to the paper alluded to, in any of the periodicals or works issued from the Philadelphia press. How different would it have been, had such an advance in our means of diagnosis been made in Europe! The *American Journal of the Medical Sciences*, which claims to be "the organ" of the Profession in America, would certainly not have passed it over in silent contempt. Can it be that jealous rivalry precludes the notice in Philadelphia of any thing done in the neighboring city of New York? We do not for a moment impute such unworthy motives to the author before us, and must attribute his neglect of our countrymen to the fact that this portion, at least, of his work was probably written

before the publication of Drs. Cammann and Clark, and has not since been carefully revised.

The division of "Diseases of the Sensorial System" includes Phrenitis, (acute and chronic,) Mania-a-Potu, Apoplexy, Paralysis, Chorea, Epilepsy, and Neuralgia. The diseases of the "Motory System," treated of in this volume, are Gout and Rheumatism.

Of the seat of Rheumatism our author entertains the following views :

"For my own part, I am inclined to hold, with Craigie, that the chief, if not the exclusive, seat of rheumatism, is the tissue which is termed 'aponeurotic'—the aponeurosis, fascia, or tendinous expansion, which, invariably connected with the periosteum or capsular ligaments at the articular extremities, covers or supports each muscle to a greater or less extent, penetrates into the substance of the muscle and passes at each joint from one part of a limb to the other, and from the limbs to the trunk, forming a covering of the greatest extent, next to the skin, in the human body.' "

Prof. D. admits the hereditary predisposition to Rheumatism, and adds :

"Beyond this, and the fact that a second attack supervenes more readily upon any given individual, owing not only to the building up of a constitutional diathesis, but probably also, in some measure at least, to obscure changes impressed upon the parts first affected—beyond this, we know little of the predisposing causes of rheumatism. Muscular fatigue is, perhaps, the only one which we can affirm to be definitely pointed out, and the malady is hence accounted for in its aptness to attack the hard-working laborers of the lower classes. It is also commonly believed, that a limb or joint which has been previously twisted or dislocated, or weakened by a blow or sprain, is ever after more liable to be acted on by the several circumstances that tend to give rise to rheumatic inflammation."

On the treatment of acute Rheumatism we find that "Prof. Mitchell, of Philadelphia, has discovered that counter-irritants of this sort, are frequently more serviceable when applied to the spine, than directly over the part. He selects the portion of the column whence issue the nerves that supply the seat of the inflammation. The suggestion is a valuable one, and deserves your attention." On the treatment of Chronic Rheumatism no allusion is made to the spinal applications. Yet, nothing is more satisfactorily demonstrated than the efficacy of this plan of treatment in both forms of the disease, but more especially in the chronic. The pathology of Rheumatic

affections, as at present understood by many, would lead irresistibly to this, as the most efficacious treatment, even were it not substantiated by the daily observations of those who resort to it. We would refer to a paper on the subject published as long ago as 1836, in the Southern Medical and Surgical Journal.

The "Diseases of the Excrerent System" comprehend Variola, Varioloid, Varicella, Vaccinia, Rubæola, Erysipelas, Scarlatina, and Dengue. The last chapter of the work occupies about twenty pages, and treats in general terms of some of the affections of the "urinary organs," as Diabetis, anuria, morbid urines, gravel, renal calculi, nephritis, Bright's disease, nephralgia, cystitis, cytherismus, vesical calculi, and lithic diathesis.

In concluding this very imperfect notice of the work before us, we apprehend that we may incur the imputation of having dealt unfairly with the author in presenting a picture rather of its defects than of its intrinsic merits. We felt, however, in accomplishing the task, that whilst nothing we might say could add to the deservedly high reputation of the distinguished author, it was due to the Profession, and especially to the Profession at the South, to notice some of the most important omissions in a work emanating from so imposing a source. Errors are baneful in proportion to the authority by which they are sanctioned. We trust, therefore, that our strictures may be received in the spirit by which they were dictated, and that a new edition of the work will be brought up "au niveau de la science."

D.

PART III.—MONTHLY PERISCOPE.

On Ascites. By Prof. C. J. B. WILLIAMS, M. D., F. R. S., &c.—We now go on, from inflammatory affections, to *ascites*, which is a species of flux, or more properly, dropsy of the abdomen. There is an increased secretion of serum, frequently to a great extent, and this we have found to be sometimes the result of chronic peritonitis; at other times, however it is a consequence of disease, not of an inflammatory nature. It may arise from the sudden suppression of another flux, such as diarrhœa, or the stoppage of the catamenia. Sometimes, *ascites* occurs as a part of general dropsy, from disease of the heart or imperfect action of the kidneys, or a general cachectic state. More commonly, *ascites* arises from an obstruction to the return of the

blood from the abdominal vessels, as in disease of the liver. In such case, it is frequently unaccompanied by any considerable swelling of the legs or other parts of the body. The usual symptoms are: swelling of the abdomen, attended by fluctuation, and a dull sound in the most dependent parts, but the position of this varies; where there is a slight degree of effusion, the fluid in the abdomen may be best felt in the sitting or standing posture, in the pubic and iliac regions. It may be felt by the usual process for ascertaining the presence of fluctuation, by pressing the hand on the abdomen on one side, and gently tapping on the other; each stroke from the finger is followed by a movement of the fluid, which is impelled onwards to the opposite side. There must be some quantity of liquid to effect this. It very frequently happens that the intestines, or some of the solid contents, fall down to the middle part of the abdomen, and cut off the communication between the two sides; and, therefore, though there is a considerable quantity of fluid, you get no fluctuation. In that case, you may ascertain it by pressing the hand on the lower part of the abdomen, and adopting the process on a smaller scale. There may, however, be a source of error here; the soft parts do not fluctuate; but, where there is a solid tumor, there is a sort of fluctuation induced. I have been deceived in this manner, repeatedly, and no very correct idea can be obtained by percussion. If you strike the abdomen high up, a fluctuation or tremulous motion is propagated to the finger; the same thing is found with a tumor, such as the enlarged liver or spleen, and, on one occasion, I was thus led to mistake an enlarged spleen, of enormous size, for a tumor in the ovarium. The same thing will occur when you try fluctuation between bodies at a short distance; and it is difficult to say, where the walls of the abdomen are thick, or where there is a considerable amount of soft or fatty matter, whether such fluctuation is the result of the liquid or of the solid matter. The best mode of distinction, therefore, for small quantities of liquid, is, certainly, the sound on percussion, as I pointed out in speaking of chronic peritonitis. In this manner you may readily displace a small quantity of liquid by pressure. You will find, in these cases, the lower part of the abdomen to sound dull on percussion; but, if you press inwards, you get rid of a quantity of liquid, and come in contact with the intestines; and, therefore, the difference of forcible percussion, and of gentle percussion, will enable you to distinguish the presence of liquid. Hence, you find, when pressure is not employed, that there is a dull sound on percussion, but by pressing on the parts, and then percussing, there is a clearer sound, and this is a pretty sure proof of liquid being present in the lower part of the abdomen; this may be ascertained by the patient standing; and, in order to get the liquid in front, the patient should be desired to lean forward. This plan is also available for making fluctuation more distinct, or perceptible in other cases. The same practice may be applied to the flanks, and I have been enabled, in many instances, to announce this commencement of ascites, before many

others could detect it by fluctuation. Another mode of diagnosis between ascites and ovarian tumor—between liquid in the peritoneal, and liquid in the ovarian, sac—is important to be noticed; its distinction is, however, very easy. Ovarian tumors begin low down, on one side, gradually rising up, and, when they occupy a great extent of the abdomen, the dulness will be found to be more defined, and will extend higher up; below, there is a sort of tympanitic sound of the intestines, which are pushed aside by the tumor. In ascites, it will be more in the dependent parts, that there will be dulness—towards the pubic region; and, if there is any resonance at all, it will be perceived towards the umbilicus, and in the pit of the stomach. On the contrary, in ovarian tumor, the chief dulness will be in the central portion of the abdomen, whilst the intestinal resonance will be in the flanks. In some instances, however, of very advanced ascites, the fluid may be so extensive as to cover the intestines completely over, so that the abdomen is dull in every region, both behind and before; but, such cases are unusual; and, even then, by pressing inwards, as far as the walls will allow, and using strong percussion, the tympanitic sound may usually be heard towards the umbilicus. There are cases of adhesion of the intestines to the sides, so that they cannot be displaced by liquids. Under such circumstances, although dropsy be present, there will be a degree of resonance on percussion, along the tract of the intestines. In most cases, ascites is accompanied by a scanty and turbid condition of the urine, which is also high colored, or else, in many instances, it is impregnated with albumen. It is, not unfrequently, also connected with disease of the kidney; and you must remember that ascites, or dropsy of the peritoneal sac, may be dependent on some other causes, of which there will be found signs: for instance, a person will be suddenly attacked with swelling in the abdomen, on the suppression of some discharge. The disease is, here, somewhat of an inflammatory character, and, not unfrequently, if it remain unsubdued, anasarca will take place. In ascites from diseased liver, there is, generally, some local sign of hepatic disease. Sometimes attacks of jaundice, or bilious affections, occur, and the intestinal and urinary evacuations show, more or less, symptoms of disorder. The ascites must be diminished or removed, before we can determine the exact position of the liver. In many cases of ascites, the enlargement of the liver may be felt by pressing the hand on the right side, or using gentle percussion: this presses away the fluid, and you then find some resisting body in that direction. Extensive ascites will impinge on the region of the chest, and cause some of the signs of disease of the thoracic organs; the tumor, pressing up the diaphragm, will produce imperfect respiration, or interfere with the due performance of this function. In other cases, there will be symptoms of something like hypertrophy of the heart, this organ being thrown forwards against the chest. You judge of this by the amount of swelling. There is yet another cause of ascites to be noticed, and that is a curious one: it is—obliteration of the ascending cava; in a

few instances, in which this has been observed, not only ascites of the belly, but, likewise, dropsey of the lower extremities, have been remarked as a consequence; obstruction of the vena cava inferior, or of a portion of the vena portæ, generally leads to ascites.

The *treatment* will depend very much on the cause. When it arises from simply suppressed excretion, it may require general depletion, or cupping over the region of the loins. The chief medicinal remedy, in these cases, is elaterium, in small doses; or cream of tartar, in doses of from half an ounce to an ounce; taken the first thing in the morning, and sometimes combined with jalap; after this, diuretics may be given; but the greater portion of these are of no use, until the main symptoms are reduced, and, often, such medicines are found merely to irritate, instead of doing good. Sometimes a warm bath is useful, particularly where the disease is connected with suppressed perspiration, and a dry state of the skin. In cases of diseased liver, or diseased heart, or both, mercurials, combined with diuretics, answer best: such as squills and colchicum, digitalis, tincture of cantharides, cream of tartar, spirits of juniper, tincture of horse-radish, acetate of potash, iodide of potassium, &c.; these two last may, sometimes, be combined together. Blisters to the abdomen are also of great efficacy, in some cases of low inflammation of these parts. If the ascites be extensive, and the above medicines produce but little impression, hydragogue purgatives sometimes cause copious evacuations, but they exhaust, rather than relieve, the system. Diuretics do no good; and, then, we must have recourse to tapping, which gives present relief, and is further useful, inasmuch as other remedies are then enabled to act with more freedom. It is on these occasions, that we are often, for the first time, enabled to examine the abdomen clearly, and to make out the diagnosis. In the same way, we may be guided to the use of mercury, if the disease be in the liver; or of iodine, if there is any enlargement of the general glandular system. After tapping has removed the fluid, a tumor may still remain in the abdomen, and this may then be found to depend on an enlarged ovary. Sometimes it is the liver which is enlarged; or, again, it may be the spleen. In all these cases, iodide of potassium has been known to exercise very good effects.—*London Medical Times*.

Treatment of Typhus.—Dr. Davidson, in the *London and Edinburgh Medical Journal*, thus sums up the treatment of typhus fever. He considers that, as typhus is a disease which cannot be checked in *limine*, and is often tedious in its progress, causing great emaciation and exhaustion, measures which may vitally lessen the powers of life, such as bleeding, vomiting, and excessive sweating or purging, ought not to be used without very strong and special reasons. The ordinary measures may be the following:—Place the patient in a large, well-ventilated apartment, on a mattress, with few bed-clothes; let the head be shaved, and kept cool with an evaporating

lotion, give a gentle purgative every second or third day, let the skin be bathed once or twice a day with tepid water, and this may be accompanied with small doses of tartarized antimony, antimonial powder, or ipecacuanha. The drink should be light, cooling and slightly diuretic; and the diet nutritive, but light, and little liable to acescency. When there is a tendency to congestion in any organ, a little calomel, or hydrargyrum cum cretâ, may be combined with the purgative, or calomel with a small quantity of opium may be given every six or eight hours. The application of two or three leeches to the temple or nostrils is often useful in congestion of the brain, and also where there is intense head-ache, which is often the forerunner of delirium. Blisters are also often advantageous in such cases. Derangements of particular functions, or symptoms arising from idiosyncrasy of constitution, sometimes occur, and must be treated accordingly. Mercury in small doses is frequently useful in promoting several of the secretions, and in relieving the congestion of internal organs. Opium is injurious in a large proportion of cases, from its tendency to cause congestion in the head; but where diarrhœa is a symptom, it ought to be administered with a view to check the exhausting evacuations. Wines and other alcoholic liquors, as they contain both stimulant and alimentary elements, are the most to be relied on for supporting the strength, and are the least injurious. The pulse, taken along with the general symptoms of exhaustion, may be held to be the rule for its exhibition, both as to time and quantity. Ammonia, camphor, quinine, and other similar tonics, are not to be depended on in bad cases; and when exhibited along with wine, frequently cause the patient to refuse both. When the disease is complicated with local affections in the head, chest or abdomen, they must be treated on the same general principles as the idiopathic disease which they represent, with this important modification, that evacuations of all kinds must be employed more sparingly, and with much caution; and that even in these cases, if there be much prostration of strength, and a very weak pulse, wine must be administered, although more moderately than in the simple disease.—*New-York Journal of Medicine.*

Successful use of Nitric Acid in a case of Purpura Hæmorrhagica. By J. J. BRADFORD, M. D., of Augusta, Ky.—On the 12th of April, 1844, I was consulted by Mr. Cline in reference to the case of his son, aged about 12 years. His health had been generally pretty good, and he was free of scrofulous disease, either hereditary or acquired.

For about two weeks prior to the attack, he had complained of lassitude and pains in the inferior extremities. His appetite was very little affected, and the alvine discharges had a healthy appearance until a few days before his seizure, when he passed a good deal of dark grumous blood, which greatly alarmed his parents.

At the time of attack his countenance was pale, the skin cool, the muscles shrunken and flaccid, the pulse quick, feeble, and varying from 120 to 140, on the slightest exertion of body; fullness of the abdomen was obvious, with slight tenderness in the right hypochondriacal region; the urine was turbid and in diminished quantity. We found the lower extremities completely covered with spots, varying in bulk from mere scarlet points no larger than flea bites, to large purple blotches, of the size of a fifty cent piece. The front part of the abdomen presented numerous purple spots, quite large. On the chest there were some also, of less size, while those on the neck, face and upper extremities, gave the speckled appearance of the turkey egg.

There was a constant oozing of blood from the tunica conjunctiva, from the schneiderian membrane, the gums, the tongue, the soft palate, the fauces, and indeed from all the mucous membranes, excepting only the bladder and urethra.

The treatment of the case was at first by calomel and rhubarb, as follows:—R. Cal. and Rhei. aa. grs. xv; mix, and divide into three parts and give one every night, with a dose of castor oil on the next morning if the powders fail to give one or two good alvine discharges.

April 14.—The first two powders acted freely on the bowels, but the symptoms were aggravated. The third powder was not given, but in its place the following prescription was administered:—R. Nitric Acid 1 drachm, pulv. gum arabic, white sugar, aa. 2 drachms, water 5 oz. mix, and give half a table-spoon full every six hours, followed every third day by sulphate of magnesia, if the bowels should not be opened.

April 17.—Symptoms rather better. Patient is not so weak. Less blood passes from the stomach and bowels, and he has a motion without resorting to the cathartic. The petechial appearance is stationary. Continue the medicine.

April 19.—Evident improvement in all the symptoms. The appetite increased. Pulse 112, and very little blood oozes from any of the mucous membranes. Continue the medicine.

May 1.—The medicine was renewed to-day for the last time, and by the 20th of the month he was entirely restored.

From the success of nitric acid in this alarming case, I feel justified in recommending the remedy to the notice of my professional brethren; at the same time I resign to others all speculations as to the *modus operandi*.—*Western Lancet*.

Blisters in Children.—Some discussion took place respecting the use of blisters in children. Generally, their employment was looked upon as only a choice of evils, and two cases were related in which their application produced fatal results. The President had found, in cases where blistered surfaces were healed with difficulty, that the mixture of a grain or two of opium with an ounce of spermaceti ointment was of great benefit. In cases in which morphia was em-

ployed endermically, the difficulty often was, to keep the blistered surface open.—*London Lancet*.

Valerianate of Quinine—its Therapeutic Employment—Mode of Preparation and Administration. (Translated from the French—*L'Abeille Medicale*.)—Dr. Francis Devay, Physician to the Hôtel Dieu de Lyons, through an essay published in the *Gazette Medicale*, directs the attention of practitioners to a new combination of valerianic acid with a vegetable alkali—quinine. We are induced to augur favorably of this union of the active principle of valerian to the medicinal agent of the most powerful of our exotic products. According to M. Devay, this provision is fully justified by clinical verification: valerianate of quinine in small doses is anti-periodic, very effectual, and superior to the sulphate by its nervo-sthenic properties.

Doubtless the gastro-intestinal accidents produced by this latter salt have been much exaggerated; still, it is no less true that the sulphate is much more irritating than the bark in substance; first, by reason of its greater solubility; and again, because it has not the corrective properties possessed by the Peruvian bark, viz.—tannin.

It is not so with the valerianate. In this last product the quinine is modified by its intimate association with a vegetable acid, which, to a slightly perturbing action upon the nervous system, joins those eminently characteristic of Peruvian bark. There is, in this, a fact connected with therapeutic dynamics, concerning which we cannot too much engage physicians to consider attentively. Thus, as we said before, in our first memoir, valerianate of zinc is an anti-spasmodic raised to its highest power; so valerianate of quinine is a medicine endowed with *anti-periodic* powers of the greatest energy. This is a fact we have acquired through numerous cases zealously collected several months since. But it is due to us to say, that the administration of the valerianate will for a long time expose the practitioner to mistakes, until the apothecaries generally become experienced in its composition, and in all the minute and delicate preparations required by it. M. Devay remarks, that to judge of the therapeutic action of valerianate of quinine, it is necessary, first of all, to satisfy ourselves of the excellence of its composition. His experiments were made with valerianate of quinine, prepared under his supervision by Mr. Guillermond, a skilful pharmacist of Lyons.

Characters.—According to the analysis of the Prince of Canino, who was the first to prepare and describe valerianate of quinine, this salt is formed of one equivalent of valerianic acid, one of quinine, and two equivalents of water, of which one constitutes its water of crystallization. The crystalline form of this salt is very different; it is octædral or hexædral. We have ourselves obtained it in hexædrons, flattened on two faces, and forming rhomboidal tables perfectly characterized. It is often agglomerated in light, silky masses. Independent of this last fact, the crystals are hard and tolerably heavy.

Valerianate of quinine has a slight odor of valerianic acid, and a decided bitter taste, recalling that of cinchona. It dissolves with facility in water at a common temperature. Alcohol is a better solvent; and olive oil dissolves it equally well, assisted by a slight heat. The mineral acids, and most of the organic acids, decompose it. Submitted to a heat of about 90° , crystallized valerianate of quinine loses an equivalent of water, softens, and melts like a resinous substance. Deprived of water, it is rendered insoluble in this liquid, while, on the contrary, it is very soluble in alcohol. Exposed to a higher temperature, it cannot be made to part with its other equivalent of water, but is decomposed, and mono-hydrated valerianic acid vapors are seen to escape from the resinous mass. The aqueous solutions of this salt, exposed to the heat of boiling water, also decompose, and oily drops are seen to float upon the surface of the liquid, which cannot be made to redissolve in the water, except by means of spirit of wine, and is nothing more than mono-hydrated valerianate.

Preparation.—To a concentrated alcoholic solution of quinine add valerianic acid in slight excess. Dilute the alcoholic solution with twice its volume of distilled water; mix intimately, and evaporate in a stove at a heat not surpassing 122° Fahr. After the evaporation of the alcohol, the valerianate is exhibited in the form of handsome crystals, here and there grouped or isolated, which increase from day to day.

The valerianate of quinine may likewise be prepared by double decomposition, in mixing sulphate of quinine with valerianate of lime or baryta, both being dissolved in weak alcohol. We have ourselves obtained this salt in mixing an alcoholic solution of the neutral sulphate of quinine with an alcoholic solution of valerianate of potash.

The process succeeds, after several successive trials, to insure the perfect decomposition of the two salts. These methods are only good in saving time; it is far better to act in a direct manner, so as to have finer and purer products.

Whatever mode of preparation be adopted, it should always be borne in mind that the solution must be evaporated slowly, with a gentle heat, and the crystals not be separated from the mother waters except to dry them in the open air.

Valerianate of quinine may be distinguished as follows:

1st. A concentrated alcoholic solution of valerianate of quinine precipitates the concentrated neutral aqueous solution of nitrate of silver: this precipitate is redissolved in a large quantity of water.

2d. An aqueous solution of valerianate of quinine does not precipitate one of chloride of barium.

3d. This aqueous solution, submitted to ebullition, allows some oleaginous drops of melted hydrated valerianate to separate.

4th. If this solution be treated with acids, valerianic acid is disengaged, which may easily be recognized by its odor; and if this decomposition be effected with crystallized valerianate of quinine

and a concentrated liquid acid, valerianic acid will be obtained in an oleaginous form.

Mode of Administration.—Like the valerianate of zinc, this of quinine being very delicate, or more correctly speaking, easily decomposed, it is best to administer it in the most simple form: in this belongs a necessary condition to its successful use.

We mostly give it in a gummous solution. Five decigrammes of the salt, (8 grs.) according to our experiments with Mr. Guillermond, dissolve easily in 100 grammes of gummous vehicle. One of the great advantages of valerianate of quinine is to be able to dissolve it easily in oil, and use it in this manner for frictions and embrocations upon the region of the spleen. With this object we have made use of the following liniment:

R Olive Oil 60 grammes.
Valerianate of Quinine, 1 gramme. (near 20 grs.)

For neuralgia we use commonly pills containing 6 centigrammes each, prescribed in the simplest manner.

To appreciate the therapeutic value of valerianate of quinine, M. Devay reports, out of many cases under his observation, 14, for the most part severe and complicated intermittent fevers, which were cured by the administration of valerianate of quinine, when the sulphate even proved abortive. Each dose from 10 to 40 centigrammes ($1\frac{1}{2}$ to 6 grs.) a day, according to circumstances. The author cites no instances of failure, and mentions no inconvenience resulting from the employment of this new therapeutic agent.

He concludes thus:

1st. Valerianate of quinine is a superior antiperiodic to the sulphate by its nervo-sthenic properties, and because it acts in smaller doses.

2d. Its pure and simple administration is of equal value with that of cinchona and the *névritiques* combined.

3d. In fevers of the worst character (*ataxiques-malignes*) it is thought to render the most eminent services by its specific properties.—*Am. Jour. Phar.*

Combination of Copaiba with Purgatives in Gonorrhœa.—From an account given by M. Jacquetant of the Hospital practice of M. Diday, it would seem that the balsam of copaiba acts much more energetically in the removal of gonorrhœa if combined with purgatives. The formula which M. Diday found most successful, was three drachms of the balsam of copaiba, four drachms and a half of the powder of cubeba, and forty-five grains of the powder of jalap, made into an electuary, of which one half is taken in the morning and the remainder in the evening. The treatment rarely lasted more than five days, by which time a permanent cure was in general effected.—*Gazette Médicale de Paris* and *Edinburg Med. & Surg. Jour.*

Proposal to treat Protracted Mammary Abscess by the Breast-pump and the Syringe. By ALEX. WOOD, M. D.—This proposal, which appears to be a novel one, and to be well worthy of trial, is as follows:—"As soon as the indistinct fluctuation or rather the boggy feeling, by which the formation of matter in these abscesses can be detected, is distinctly ascertained, let a small bistoury or abscess lancet* (the common lancet will sometimes not penetrate deep enough) be carried down until the matter begins to escape. After all that can be squeezed out by pressure is removed, let the breast-pump be applied over the orifice, and the rest of the matter be drawn out. The sinus is then to be injected with some astringent solution, by means of a small syringe. The syringe employed is the small glass one* for the urethra, sold by most apothecaries. The lotion I have hitherto used is the one recommended by Mr. Hey, though it may be doubtful if it possesses any peculiar advantages. R. aquæ puræ ʒxv; spt. rosmarin. ʒi; spt. lavandul. com. ʒi; zinci sulphat. gr. xxx.—M. fiat lotio. The sulphuric acid lotion of Sir A. Cooper will probably answer as well.

"A pledget of lint dipped in the lotion is then to be applied outside, and covered with oiled silk; over this a compress may be placed, and firm pressure maintained on it by means of adhesive plaster. In some cases the walls of the abscess will unite at once, and all that remains to be done is to trust to time for the removal of the surrounding induration, or to attempt to discuss it by frictions with camphor liniment, mercurial or iodine ointment, or the application of the emplastr. ammoniaci cum hydrargyro.

"Where the surfaces do not thus unite, the falling in of the breast, produced by the exhaustion of the glass, will be found to have disappeared; the cavity in such cases has only to be injected two or three times a-day, which will serve at once to keep the opening free for the discharge of matter, and will also tend to arrest the further extension of the ulcerative process.

"The treatment of acute and more superficial abscess may be conducted on the same general principles. The early evacuation of the matter saves the patient much suffering, and also enables the nursing on that breast to be resumed at a much earlier period. The cicatrix is also much smaller than in cases where the matter is allowed to discharge spontaneously; indeed, if the incision be made in the direction of the natural folds of the breast, that is, radiating towards the nipple, the cicatrix will in a short time be imperceptible.

"Dr. Wood has tried this plan in three cases, and with results which warrant him in suggesting it to the consideration of the profession."—*Northern Journal of Medicine. From Am. Jour. Med. Sciences.*

Re-establishment of Nervous Action after Autoplastic Operations.—M. ROBERT (de Lamballe) in a memoir read before the French Academy of Sciences in February last, states the following to be the results of his experiments on man and animals:—1st. Immediately after autoplastic operations, sensibility diminishes or disappears in the flaps, the diminution of the sensibility being directly in reason of the loss of blood. 2d. The section of the pedicle is followed by complete loss of sensibility, but after a certain length of time it reappears, and increases in the same proportion as the vascu-

* A subcutaneous incision-knife would answer well.

larity; both sometimes increase beyond the limits of the normal state, but always simultaneously. The anatomical examination of the pedicle gives the following results:—1st. After its section, the flaps are separated from all parts of the economy by cicatricial tissue. 2d. The only means of communication that exist between the flaps and the rest of the economy, are the vessels, more or less developed, which pass through the cicatricial tissue; no nervous filaments are ever met with. 3d. The nerves which existed primitively in the flap become atrophied, and may end by disappearing. 4th. Those of the neighboring parts stop at the level of the cicatrix. Sometimes they are suddenly interrupted, presenting a kind of swelling of the neurilemma; sometimes they lose themselves in the cicatricial tissue, but it is never possible to follow them into the flap.—*Lancet*.

Case of Extensive Inflammation of the synovial membrane of the Knee Joint terminating in suppuration, without inducing ulceration of either the hard or soft textures of the Joint. By SAMUEL TYLER, M. D.—I was called on the 29th of October, 1844, to visit a patient 15 years of age, laboring, as it was then supposed, under a scrofulous affection of the knee-joint. Upon inquiry into the history of the case, I learned that some six months previous the patient had given the limb a severe twist, whilst running over rutty, uneven ground.

Finding the joint excessively swollen, the leg so contracted as to render it almost impossible to place the foot upon the ground by force, I proceeded to treat the case in the following manner:

Commencing with the application of a blister which surrounded the joint, which was afterwards kept discharging by the use of warm poultices, I gave on each alternate day the favorite purgative of Dr. Physick, jalap and cream of tartar, in doses sufficient to procure free evacuations.

Under this treatment the general system improved somewhat, but the joint continued to swell, when on the 16th of November I made a free incision upon the inner side of the joint, evacuating at least one quart of pus. A continual discharge was kept up from this opening until the 29th of December, when I made use of "Chase's apparatus" to overcome the contraction of the limb, which was perfectly effected in less than three weeks' time, leaving the patient with a limb perfectly straight, and entire mobility of the joint.

I consider the great peculiarity of this case to consist in the fact, that where there should be so excessive and long continued inflammation of the synovial membrane, that it should terminate without inducing ulceration either of the soft or hard textures of the joint.

Am. Med. Journ. of the Med. Sciences.

[Certainly a surprising case.—EDRS.]

Statistics of Hernia.—M. Maisonneuve has made a statistical report of 11,644 cases of hernia, which were examined during a period of six years, at the Central Bureau, Paris; he thus distributes them:

Of 11,644 cases of abdominal hernia of every description, 8790 were observed in males; 2,854 were observed in females.

Of 8,790 cases of hernia observed in males, 8,237 were inguinal hernia; 307 were crural hernia; 246 were umbilical hernia.

Of 2,854 cases observed in females, 1,112 were inguinal hernia; 639 were crural hernia; 560 were umbilical hernia; 543 were vaginal hernia.

Of 8,237 cases of inguinal hernia observed in males, 4,483 occurred on the right side; 3,738 occurred on the left side; 16 not determined.

Of 1,112 cases of inguinal hernia in females, 542 occurred on the right side; 564 occurred on the left side; 6 not determined.

Of 307 cases of crural hernia observed in males, 171 occurred on the right side; 125 occurred on the left side; 11 not determined.

Of 639 cases of crural hernia observed in females, 344 occurred on the right side; 255 occurred on the left side; 40 not determined.

From these figures, Mons. Maisonneuve deduces the following corollaries:—

First. Hernia in males are to hernia in females, as 3 to 1.

Secondly. In 100 herniæ found in males, 93 were inguinal, 4 were crural, 3 were umbilical; whilst, in 100 cases of hernia found in females, the proportion was 40 inguinal, 21 crural, 20 umbilical, 19 vaginal.

Thirdly. In men, inguinal hernia are met with as often on both sides as on one only, and in the latter case, those of the right side are to those of the left, in the proportion of 5 to 4.

But in women, inguinal hernia are met with on both sides, three times out of four, and those of the right side are to those of the left, in the proportion of 5.42 to 5.64.

Fourthly. In men, crural hernia are met with on one side only, three times out of four, and those of the right side are to those of the left, as 7 to 5; whilst in women, crural hernia are met with on one side only, 4 times out of 5; and those of the right side are to those of the left as 7 to 5.

Under the head, vaginal hernia, are included all tumours of the vagina and uterus presenting externally, and requiring the use of the pessary, as cystoceles, rectoceles, and prolapsus of the vagina and uterus.

Under the head umbilical hernia, are included hernia of the linea alba, and displacements referable to the neighboring regions.—*Med. Times*, from *Gazette des Hopitaux*.

Case of Twins; there being an interval of thirty-two days between their Birth.—JOHN IRVINE, a surgeon in the British navy, records, in the *Medical Times*, (28th Dec., 1844,) the following remarkable case. Mary F., aged 35 years, was seized with labour pains, on the 1st of October, at the full period of utero-gestation; and was delivered by Dr. Burleigh, of a healthy, but rather small-sized female

infant. Three hours afterwards the placenta was cast off by the natural contraction of the uterus. Dr. Burleigh, on examining the patient at this stage, clearly ascertained that the uterus was still in a gravid state. After waiting some time for the renewal of parturient efforts, he left, with instructions to be sent for when labour commenced. On visiting his patient three days afterwards, he found her out of bed following her usual domestic affairs, and in good health. On the 2d of the following November labour pains came on, and just as Dr. Burleigh arrived, a large healthy male infant was born, and two hours afterwards, Dr. B. extracted the placenta. The patient's recovery was as rapid as previously, for on the third day she was attending to her family concerns.—*Am. Jour. of Med. Sciences.*

Term of Pregnancy exceeded by Four Weeks.—A pregnant woman, who had already borne three children, was attended by Dr. Hayn, of Königsberg, for "gastro-nervous fever." The affection was so severe that premature labour was threatened. Dr. H. made an examination *per vaginam*, and felt satisfied, as well from this as from the woman's account, and her other symptoms, that the natural term of her utero-gestation would expire about the 23d of May, 1841. The patient recovered from her fever, and at the above-mentioned date was seized with weak labour pains, copious mucous secretion from the vagina, and remarkable sinking of the uterus into the pelvis. After three days the pains wore away; and four weeks thereafter the woman was with difficulty delivered of an unusually large child.—*Northern Journal of Med.*, May, 1844, from *Caspar's Wochenschrift*, No. 47, 1843. *Ibid.*

Evolution and Delivery with Presentation of the Arm and Shoulder. By Dr. SUSSEWIND.—[We give the following case as we find it quoted in the *London Medical Gazette*, 20th December, 1844, from *Caspar's Wochenschrift*, No. 23, the dimensions of the foetus are not given.]

A healthy woman, who had already had several children without difficulty of any kind, was taken in labour again, and besides the waters, lost a considerable quantity of blood. When seen first, the right upper extremity of the foetus was found projecting from the external parts of the mother: the pains at this time had almost ceased, but on an attempt being made to introduce the hand, and turn, they came on again with such violence that the attendant was on the point of taking away some blood to moderate their force. The mother now said she felt the child advancing, and in fact, the right shoulder and collar bone were forced beyond the vulva: the lower extremities and buttocks were at the same time forced into the hollow of the sacrum, and by and by the right ramus of the lower jaw came into sight, the shoulders and arm having receded. But little effort was required to disengage the breech, upon which the child was quickly born; but it was dead. The placenta followed, and an hour afterwards the woman felt herself very comfortable.—*Amer. Jour.*

MEDICAL INTELLIGENCE.

We learn from a correspondent that a Medical Society was formed for East Tennessee, at Knoxville, on the 7th May last. The name assumed is "The Medical Society of East Tennessee." The object of the association "will be to improve and elevate the standard of Medical Science within its limits—to elicit information by reports of cases, epidemics, &c." At the annual meeting in May next a prize will be awarded to the best essay on Erysipelas. S. B. Cunningham, M. D., of Jonesboro', is President, and F. Ramsay, M. D., of Knoxville: Corresponding Secretary of the Society.

METEOROLOGICAL OBSERVATIONS, for June, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west Wash. Altitude above tide
152 feet.

DAYS.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sunrise.	4 P. M.	Sunrise.	4 P. M.		
1	48	77	30 in.	29 9-10	E.	Fair.
2	53	78	9-10	7-10	s. E.	Fair.
3	59	82	9-10	9-10	s. E.	Fair.
4	59	85	9-10	9-10	s. E.	Fair.
5	62	87	8-10	8-10	s.	Cloudy.
6	66	88	9-10	9-10	s.	Flying Clouds.
7	66	82	9-10	9-10	s. E.	Do. do.
8	68	88	9-10	8-10	s. E.	Do. do.
9	70	85	9-10	8-10	s. E.	Fair—blow.
10	72	83	9-10	9-10	s.	Showry 1½-10 in.—hot vapour.
11	72	86	9-10	8-10	w.	Cloudy.
12	72	90	8-10	7-10	w.	Blow—variable.
13	76	94	7-10	8-10	w.	Fair. [1-10 inch.
14	68	94	8-10	8-10	w.	Fair—storm of wind and rain
15	69	90	9-10	8-10	n. w.	Fair—shower 2½-10 inch.
16	69	77	9-10	9-10	variable.	Rain 8-10 inch—storm.
17	69	88	8-10	9-10	s. w.	Cloudy—thunder, &c.
18	69	88	8-10	9-10	n. w.	Rain at 3, P. M., 1 inch.
19	70	87	30 in.	29 9-10	s. E.	Fair.
20	71	86	9-10	9-10	s. E.	Cloudy.
21	70	92	8-10	7-10	w.	Fair.
22	72	94	7-10	7-10	w.	Fair—stiff breeze.
23	72	98	7-10	7-10	w.	Fair, do.
24	73	98	8-10	8-10	w.	Fair, do.
25	76	96	8-10	7-10	w.	Fair—thunder and lightning.
26	72	96	7-10	8-10	w.	Fair—thund. and light. 9, P. M.
27	73	92	8-10	8-10	s.	Variable—thunder, showery.
28	72	94	8-10	7-10	n. w.	Variable—storm of wind.
29	73	89	7-10	5-10	w.	Showery 3-10 inch.
30	65	83	9-10	8-10	w.	Fair.

16 Fair days. Quantity of Rain, 2, 6-10 inches. Quantity of Rain for first six months of 1845—14, 2-10 inches. During the last four months, less than 7½ inches. July 23d, at 4, P. M., Therm. 100°—in sun 131°.

SOUTHERN MEDICAL AND SURGICAL JOURNAL.

Vol. I.]

NEW SERIES.—SEPTEMBER, 1845.

[No. 9.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Intermittent Fever—its various forms—their treatment—with Cases.

By LEWIS D. FORD, M. D., *Professor of the Institutes and Practice of Medicine in the Medical College of Georgia.*

The writer of the present article comes to redeem the promise made at the conclusion of a former one on the Pathology of Intermittent Fever, in the 1st No. of this Journal, by noticing some of the varied forms of Intermittent fever, with a view more especially, to their treatment.

Under this head he proposes to take up Malignant Intermittent, Remittent, and some forms of Continued Fever.

In the "Practice of Physic" of almost every author in our language, these forms of fever are considered as different species of the same genus or as themselves distinct genera; and the doctrine too generally inculcated is, that they have no common pathology, so that it may be taken as the prevalent opinion, that each requires a distinct and peculiar treatment. In this state of things, the writer is not without his fears, that to arrange these forms under one head—to co-ordinate them by one general principle of pathology and of treatment, may be regarded a presumptuous deviation from the beaten track; but he hopes to show that though different in many of their external features, yet they are fundamentally, of the same nature and require the same general mode of treatment.

It is proposed to give a brief description of these three forms—to

illustrate them by specific cases, and to deduce from these cases, some general considerations as to their pathology and treatment. We shall embrace in one view almost all the varieties of fever known to this region of country, by whatever names they may generally be called; for it is well known to every practitioner of experience, that idiopathic, endemic fevers of this climate of miasmatic origin, prevailing in the summer and autumn, uniformly present at their beginning, at least, a paroxysmal character—that cases of fever continued from their commencement are extremely rare, this latter form being the endemic of the winter season of cold climates and caused by concentrated human effluvia.

Malignant Intermittent.—This form receives its name from its great danger. If simple Intermittent fever claims our attention by the interest of its pathology, this complicated form demands it on higher grounds; for, whereas the first is a disease easily diagnosticated, easily cured—cured, in the great majority of instances, as well by the intelligent planter and by the ignorant doctor as by the most skilful of the profession, and never fatal; the latter is insidious, rapid in its progress, and without appropriate treatment, uniformly fatal in its termination; and yet, with all this, in competent hands, as manageable almost as the simpler form.

This disease is known to the profession at large, by the elegant standard works of Torti, Alibert and Bailly, as raging endemically, at Rome and other localities within the influence of the celebrated Pontine Marshes. Subsequent to these, we have histories of the disease by some distinguished French army surgeons, as it occurs in the north of Africa and in other situations exposed to malarious exhalations of peculiar virulence. But it is a sad mistake to think that it exists only in such pestiferous localities. The young practitioner of this climate should know, that although his lot is not cast within the influence of the pontine marshes, he will be called upon to treat sporadic cases of this disease, occurring in situations, where simple intermittents and remittents are the prevalent forms. The lineaments, therefore, of this formidable disease should be known to him, its danger appreciated, its pathology and its proper treatment settled, otherwise his sporadic cases will too often prove fatal cases, in his hands.

The forms of Malignant Intermittent are almost infinite; but this general description will apply to them all—viz: intermittents attended with inflammation or congestion of some vital organ, so extreme as to endanger its integrity and the life of the patient, during

the paroxysm ; *at the conclusion of which, however, there comes on a perfect intermission of all the violent symptoms.* This latter trait is apt to deceive the inexperienced physician, leading him to a false prognosis and consequently to an inefficient practice, when the most prompt and energetic treatment is demanded ; for one of these violent paroxysms, whether the first of the attack or succeeding to milder ones, is the sure harbinger of others still more violent—so that if unchecked, the disease will prove fatal at the third, fourth or fifth paroxysm.

Torti, the distinguished physician of Modena, in his work, enumerates seven varieties of this fever. Subsequently, Alibert, in his Inaugural Thesis, extended the number to nineteen, naming the varieties, according to the prominent malignant symptom ; such as, the hepatic, syncopal, algid, soporose, nephritic, &c. They may all, however, be embraced under three general divisions :—1st, those cases in which the cerebro-spinal organs are chiefly affected ; 2nd, those cases in which the thoracic organs ; and 3rd, those in which the abdominal organs suffer most.

The first division embraces the comatose, delirious, convulsive, tetanic, &c.—varieties marked respectively by coma with its accompanying symptoms, by delirium, convulsions, &c., these symptoms becoming urgent during the paroxysm, and disappearing as it abates. In the comatose variety, of the tertian type, it is not uncommon for the intermission to pass without a trace of head-ache remaining ; notwithstanding which a more violent paroxysm may confidently be expected.

The second division embraces such as are marked, during the paroxysm, by symptoms of pleuritis, pneumonia, syncope, &c.

The third embraces such forms as the cardialgic, peritonitic, choleric, dysenteric, hepatic, &c.

The cardialgic is marked by excruciating pain at the epigastrium, either continuous or intermittent ; in the latter case, grievous complaints are forced from the patient, accompanied with great anxiety of countenance, and vomiting, and often with general spasm of the muscles. Thus too, in the choleric form, the paroxysm is marked by all the symptoms of cholera morbus, the intermission being free from them.

But there is a form of malignant intermittent, of more frequent occurrence, perhaps, than any other, known by the name of *algid fever*, and marked by the following symptoms :—During the cold

stage, which is unusually protracted, there is a great degree of oppression at the chest and abdomen, prostration of strength and restlessness. There is an attempt at the formation of the hot stage, which proves abortive; for soon the skin becomes cold, pale and shrunken, on the extremities, but cool elsewhere, and covered with a cold, clammy perspiration, while only the central parts of the body are very hot. The pulse is small, frequent and almost imperceptible at the wrist, increased restlessness, jactitation, impatience of bed covering, with complaint of oppressive heat, not only at the chest and abdomen, but even on the cold extremities, so that the patient refuses to have them covered. The intellect is generally undisturbed, and the expression of the countenance quiet, even where the disorder of the temperature and circulation is so extreme, that the tongue even becomes cold and the pulse ceases. This irregularity continues through the whole period of the paroxysm, and it is only at the end of it that the temperature and circulation are partially restored. When we consider that the functions most conspicuously disordered in this algid fever, are those of circulation and of calorification—functions dependent on cerebro-spinal nervous influence, we are disposed to place this form under the first division, and to regard these symptoms as dependent on an aggravation of that peculiar lesion of these central organs, which constitutes the fundamental character of intermittent fever. At any rate, *this algid state is not a prolonged chill*; for almost universally, in such cases, the chill is separated from this peculiar cold state, by symptoms of imperfect reaction. The two states, moreover, are shown to be different by this striking fact, that in the chill, the temperature is not absolutely diminished—at least, not in proportion to the patient's complaints of coldness; whereas in the algid state, the temperature, as measured by the thermometer, is positively diminished, while the patient complains of burning heat.

In each of these forms, as will be perceived, there is combined a local phlegmasia or congestion with intermittent fever, which latter may be of the quotidian, tertian or any other of its types. What is the relation of the local affection to the intermittent fever?—a most important question, inasmuch as the decision of it must necessarily determine our therapeutic measures; for if it bear the relation of *cause* to the intermittent fever—if it be the fundamental lesion, upon which the whole disease depends, then the rational treatment is to subdue this local affection; and the antiphlogistic regimen becomes the main part of the practice. If, on the other hand, it be regarded

only as an accident, complicating the intermittent fever, which latter disease might continue, even if this were removed, then the indication is to treat both the intermittent and the accident, each by its appropriate remedy. This latter view, it is believed, is the correct one. The writer contents himself with merely stating this opinion here, leaving the considerations, by which it is sustained, to be adduced, when commenting upon special cases, hereinafter given. Let us regard, then, this disease as consisting of two distinct elements—an intermittent fever and a local phlegmasia or congestion, having no necessary relation with each other; at least the latter not the cause of the former—let us regard the recurrence of successive paroxysms as the true source of danger, inasmuch as they renew the local affection and push it to the degree of fatal disorganization. By this view *the intermittent fever becomes the main affection*, and our ruling indication must be, to prevent the recurrence of its paroxysms; and the local affection will rank only as an accident, yet not an immaterial accident, but one, the increase of which constitutes the final danger of the case. Of course, another prominent indication, under this view, will be to subdue the local phlegmasia, or congestion. Thus, as in simple intermittent, the treatment will have respect both to the intermission and to the paroxysm, and so will be both antiphlogistic and antiperiodic. But how shall an expected paroxysm be met?—May we venture, in such cases, to use the great antiperiodic quinine? What! administer quinine after a paroxysm, during which the patient has manifested the symptoms of congestive apoplexy or of pleuritis, or above all, of gastritis, and while there yet remains the symptoms of gastritis or phrenitis, only a little moderated in violence,—what! in an hour or two after having depleted the patient to the fullest extent that prudence could justify, urged thereto by extreme violence of the local affection, shall we suddenly turn round and administer the *tonic* quinine? We answer, yes—for it is the only hope of the patient—the sheet-anchor of the case, and if it hold not, the vessel is a wreck.

It seems proper here to specify two practical precepts of great value—the one in reference to the dose of quinine, the other to the time for its administration. As to the dose, the quantity given during the intermission, is to be directly proportioned to the danger apprehended from the expected paroxysm,—if from the existing state of the patient and the violence of the preceding paroxysm, we apprehend that the coming one will prove fatal, the quantity given should be

thirty-five or forty or fifty grains. As to the time for commencing its use, this is immediately on the cessation of a paroxysm; even if the case have the tertian type, this rule must not be violated, for we have no security that it may not change into the quotidian. If of the quotidian type, we should not wait for the entire cessation of the paroxysm, but commence the use of the specific, with the sweating stage, lest the complete intermission should not allow time enough to bring the patient under its peculiar influence.

It need scarcely be added, that the treatment during the paroxysm is that which would be appropriate to an idiopathic inflammation—general bleeding and local by leeches, and cups and revulsives, sinapisms and blisters.

This way of treating both elements of this compound disease, by the alternate and sometimes even the conjoined use of active depletion and quinine, is directed by an enlightened pathology, and sanctioned by the highest authority.

The following cases from the writer's note-book will sufficiently show the sporadic occurrence of this disease in situations remarkable for the benign character of their fevers, and at the same time exhibit its symptoms more in detail. Other cases from foreign authors are added to illustrate its pathology and its appropriate treatment.

CASE 1. T. H., aged about thirty-five, was brought to the City Hospital on 28th Sept., 1840, at 5, P. M., with no account of him, except that he was brought from Bridge-row, and was taken with fever in Hamburg, two days before. At 6, P. M., this was his state: Skin uniformly hot, perspiring on the head and breast; face flushed; abdomen moderately full, *stercus* (yellow) and urine discharged in his clothes; pulse 105, full and strong; respiration frequent; tongue and lips moist; breath very offensive; eyes closed, the eye-lids resisting attempts to open them, eye-balls turned upwards; slight spasmodic twitching of the muscles of the extremities, when the limbs are moved; no paralysis; perfectly stupid, and not aroused by the loudest call; shrinks and groans from pressure on the middle dorsal vertebrae. (*A ligature to the top of each thigh to produce distention of the veins of the lower extremities; V. S. 20 oz. produced diminution in the strength of the pulse, almost obliterating it; gaping, diminished redness of the face and a relenting of the current of blood from the arm. In this state, the finger being upon the pulse, the ligatures on the thighs, were simultaneously and sud-*

denly relaxed; the current of blood from the open vein was renewed and the pulse increased in strength. Scarifications to the dorsal spine, with cups, yielded 3 oz. stupor unrelieved; 10 grs. sulphate of quinine, in solution, every two hours, as soon as the patient can swallow.)

29th, 8, A. M. Pulse 90 and soft; skin cool; eyes still closed; resisting attempts to move him; impossible to arouse him; has taken nothing, having remained stupid during the night. (10 grs. sulphate of quinine, in solution, every two hours: one dose was forced down him; saline injection.) 12, M. Has taken the third dose of quinine; injection has procured stools. (Blister plaster 7 by 4 inches to the dorsal spine.) 8, P. M. Still stupid; pulse 90; respiration not hurried; opens his eyes, when loudly called. (Two blister plasters to the legs; water during the night, if called for; two more doses of quinine.)

30th, 8, A. M. No fever; very deaf; asks for water; complains of blisters. (Cold water and thin gruel.) 3, P. M. Met the patient stalking about the entry, begging for water; skin cold; pulse extremely feeble from this effort. (Blisters to be dressed; water and gruel.)

Oct. 1st, 9, A. M. Quietly in bed; no fever; senses entirely restored; hearing good; asks for water. The case was transferred to the Physician for October.

Note.—Intermittent fever at this time prevalent in Augusta and Hamburg.

P. S.—The convalescence of T. H. was steady; he was discharged in a few days.

The facts with regard to this patient that he was taken with fever, in Hamburg, on the 26th, and that on the 28th he was picked up in Bridge-row, in Augusta, seemed to warrant the conclusion, that subsequently to his attack of fever, he was so far recovered as to be able to walk over the bridge, and farther—that he was laboring under paroxysmal fever—that he was, on his admission to the hospital, either in the second or third paroxysm. Notwithstanding the depletion, general and local, the coma continues through the whole period of a paroxysm, no abatement, until the following morning, and this improvement coinciding with the abatement of fever. In the uncertainty as to the type, whether quotidian or tertian, the quinine is ordered as soon as the patient can be made to swallow it, lest by waiting for a perfect

recovery of the senses, the remaining time of the intermission should not be sufficient to place the patient under its influence. It is worthy of remark, that here is a case of the most malignant character, brought to a happy and a speedy termination, simply by general and local depletion and revulsion external, and one saline injection, without a single dose of cathartic medicine. Would this antiphlogistic treatment alone, without the quinine, have arrested the paroxysms? The fact in this one case will not warrant us in answering—No; but the writer feels fully assured that the candid practitioner, who has had a fair opportunity of contrasting the two modes of treatment, will answer no, unhesitatingly. But, who would incur the hazard of another paroxysm in such cases, when he holds in his hand a remedy of undoubted power to prevent it, *and this a safe remedy!*—for surely we are warranted by the facts of this case, to draw the conclusion, that quinine may be safely used in large doses, even in the comatose form of Intermittent fever. Here, under the action of 45 grains of quinine, the patient comes out from a profound stupor, and recovers his senses, while under the full influence of the quinine, as his deafness proves. This case also, incidentally illustrates the value and mode of operation of the tourniquet as a therapeutic agent.

CASE 2. A. B., aged thirty-five, residence middle of Broad-street, cotton-buyer—habits intemperate—full habit, plethoric. Oct. 19th, 1840.—On the 17th, at 11, P. M., had a chill, and on the morning of the 18th represented himself to have had fever and to have passed a restless night—was not confined to bed on the 18th, but at 11, P. M., of the 18th had a chill, (as he subsequently informed the family,) and two hours afterwards was found stupid; on the afternoon of the 18th was free from fever, and sat up for two or three hours. Has taken no medicine. On the 19th, 2 A. M., first visit, find him thus:—Head hot, face flushed, skin universally hot and dry; breath very offensive; respiration hurried; breathing laborious; pulse full and strong and 115; eyes closed, resists attempts to open the lids; impossible to arouse him or to command his attention; the arms are folded on the breast, the fore-arms rigidly flexed upon the arms, and he resists attempts to extend them; lower extremities extended at full length, the legs crossed over each other; he resists every attempt to change his position. (*V. S. about 50 oz., reduced the strength and frequency of the pulse; 30 grains Calomel, when able to swallow; saline injection; hot pediluvium.*)

19th, 8, A. M. Got neither the injection nor the pediluvium; took the calomel, with great difficulty, at 4, A. M. Muscles less rigid; unable to speak; only opening his eyes slightly, on the greatest efforts; pulse 100, full and soft. (*Saline injection; Infusion of Senna, Salts and Manna.*) 1, P. M. Head more clear; muscles relaxed; has been up to stool; three copious stools. (40 grains quinine in solution—quarter every two hours.) 9, P. M. Has taken 40 grains quinine; pulse 105, soft and full; his intellect, under the use of quinine, has become entire; three more stools; roaring of the ears. (*Sinapisms, the whole length of the spine, at 10, P. M.*) 11½, P. M. No chill; very deaf; no head-ache; pulse as before. (*Cold water and gruel.*)

20th, 8, A. M. No chill, last night; has slept a little; pulse 115 and strong; head-ache; is quite deaf. (*V. S. 20 oz.*) 3, P. M. Still head-ache violent; deafness somewhat abated. (*V. S., Com-pound Senna Infusion.*)

During the night of the 20th, his fever was light; on the morning of the 21st, he was without fever—he was salivated. His convalescence was slow, being retarded by an attack of mild *delirium tremens*; which was due possibly to too free depletion; it was relieved by morphine. On the 10th November, he suffered a paroxysm of Intermittent fever; which was followed by two others, of the tertian type. This simple fever was arrested by moderate doses of quinine.

This is a case of quotidian Malignant Intermittent, and shows strikingly many of the characteristics of this affection: that paroxysms, marked by the most malignant, dangerous symptoms, may yet be followed by a perfect intermission—this patient being comatose in the second paroxysm, is yet, before its access, sitting up and conversing freely with the family, giving an account of his chill, &c.—that it is a perfect Intermittent. It shows, too, a progressive increase in the violence of the paroxysms; the second so violent as to warrant the opinion, that another would prove fatal. It shows the safety of giving 40 grs. of quinine a few hours after a state of cerebral congestion so great as to require most copious bleeding to relieve it, and therefore commends this medicine to our fullest confidence, under such circumstances. To any one, who could possibly doubt if this were a case of Intermittent fever, we have a corroboration in the fact, that at the third hebdomadal period, it is renewed, in the simple form.

CASE 3. Nov. 22d. A. B., aged fifty-five; residence on lower

Broad-street; of active habits: full habit, florid complexion, permanently red nose and cheeks—a free liver and drinker. Three weeks since, he had three paroxysms of quotidian Intermittent fever; for which he took, by his own prescription, one active cathartic and ten grains of quinine. Since then his mind has been harrassed by embarrassed business.

On the 20th, had a slight chill, about the middle of the day. On the morning of the 21st, represented himself as having been crazy during the previous night. On the 21st, a chill about 12, M.; was in his room alone, upon the sofa, during the afternoon, and slept alone. On the morning of the 22d, was at the breakfast table, but was observed to look very unwell, and represented his head as feeling very bad, and that he had slept soundly, without waking, the whole night; ate a hearty meal. At 10½, was suddenly seized with a chill; free vomiting, discharged the whole of his breakfast; went to bed, complaining of a violent head-ache. 22d, 1, P. M., first visit—this is his state: face flushed; skin hot, universally; eyes staring, the eyelids frequently snapping violently; he answers to every question in a hurried manner—*Yes sir*—and attempting further, to speak, but splutters with his tongue; the muscles of the extremities as well as of the tongue are extremely agitated—fingers and toes being perpetually in motion, and occasionally, one or other of the limbs convulsively agitated; lies on his back, and resists every attempt to move him; the action of the heart excessive, and its impulsion against the ribs fearfully violent; pulse in the left arm very small, but tense; (*Note.*—Anomalous distribution of radial artery of the left side.) in the right arm, full, strong and utterly incompressible, elevating the finger, when forcibly held upon it—120. (*V. S.* 50 to 60 oz.; 40 *grs.* Calomel; strong Saline Injection.) Bleeding was difficult, on account of the restlessness of the patient, uncontrollable;—by this copious bleeding, the pulse was not entirely subdued, being still full and strong. The calomel was greedily swallowed. The introduction of the saline injection increased his agitation extremely; this agitation seemed to depend on the effort to resist its rejection from the bowels and that of attempting to get out of bed; during this time, he was pulling forcibly, at the penis and testicles; was lifted from bed and placed upon the easy-chair stool; still he had not intelligence enough to perceive that he was on the stool; but forcibly closed the spincter of the rectum, and continued to drag at the testicles, &c. This resistance to discharging of the bowels was finally overcome

only by filling his bowels with repeated injections. During this manipulation with the patient, his linen was observed to be extensively stained with urine, but now dry;—during this struggle, the orifice in the vein bled an indefinite amount, saturating the sleeves of two shirts and running down to the hand, before the accident was discovered; after discharging the bowels, he was removed to bed; the pulse now much reduced in frequency and strength; muscles composed; skin perspiring; still answers but *yes sir*, to every question; same want of control over the muscles of the tongue, on any attempt to speak; at 4, P. M., a compound cathartic of salts and senna; this produced three or four copious stools, in the beginning of the night. 22d, 12 at night—pulse 100, soft and full; skin soft; muscles not entirely quiet, but much less agitated; still answers, *yes sir*, to all questions, but with less vehemence and with more deliberation; the attempt at further articulation, ends in a spluttering; I estimate that he does not know me. (36 grains quinine, in solution, one-third every two hours, commencing at 2 o'clock.)

23d, 8, A. M. Has taken 36 grains quinine, the last dose at six this morning; he recognizes me; indisposed to talk—answering no to some questions, but cannot command his tongue perfectly enough to utter more than four or five words; slight head-ache; pulse 95, soft; skin soft; tongue soft and moist, not furred, trembles on thrusting out; has taken some gruel. (*Sinapism to the whole of the spine—which is tender on pressure, at the third, fourth and fifth dorsal vertebrae—to be kept on as long as it can be borne.*) 12, M. No chill; speech much improved; some remaining difficulty of utterance; complains of difficulty in finding words to express himself; gives some account of the state of his health, previous to yesterday, but remembers nothing of the transactions of yesterday. 10, P. M. Still deaf; no head-ache; improved in every respect; two yellow stools in the afternoon. (3 grains quinine every two hours, from 12 to-night to 8 in the morning—equal to 15 grains.)

24th, 9, A. M. Has passed a comfortable night; asks for coffee. (*No medicine—gruel and water.*) 9, P. M. Very deaf; no fever. (*Pediluvium hot.*)

25th, 9, A. M. Has passed a good night; is sitting up, taking coffee and toast; hearing perfect; some soreness of the gums, the more annoying from having a set of artificial teeth.

28th. Discharged, having improved steadily; suffering only some slight inconvenience from sore gums.

Here is a patient, about the third hebdomadal period from an attack of simple intermittent, seized with intermittent malignant in its very first paroxysm; yet that first not so violent as subsequent ones; for he retained, during the night of the 20th and the subsequent morning, some recollection of his case, saying he had been crazy. The second paroxysm, more violent than the first, passed without his consciousness, as he represented himself to have slept soundly; and, moreover, the urine-stain on his shirt, and its dry state, warrants the inference, that his coma was so profound as that he, unconsciously, discharged the urine in his bed. A quotidian Intermittent—a true intermittent, for he is able, after such a violent paroxysm, to dress himself, appear at the breakfast table, and even to eat a hearty meal. The third paroxysm still more violent, the local symptoms so urgent, as well as the general arterial action, as to warrant the opinion that without the freest depletion, irrecoverable injury would have been done to the brain—illustrating the necessity of treating vigorously, the local affection, whether of the nature of congestion or of inflammation. The question very naturally presents itself—what would probably have been the course of this case, had it been trusted to the antiphlogistic and revulsive treatment alone, without quinine? In all probability, the paroxysm would have returned on the 23d, and considering the degree of cerebral disease, which existed at 11, A. M. of that day—the period of the expected paroxysm, is it not reasonable to presume, that under the commotions of a paroxysm, the brain would have been disorganized to a fatal degree? When it is remembered that the brain, at 11, A. M., of the 23d, was in a state of far greater disease than at 11, A. M., of the 22d, and the danger of that paroxysm is remembered, we think another one would have proved fatal, notwithstanding the most vigorous antiphlogistic measures had been used. At any rate, where is the wisdom or prudence of subjecting a patient to such imminent danger, when it can be arrested by a safe remedy?—for surely this case confirms the opinion of the safety of quinine in large doses, on the decline of a paroxysm of cerebral malignant fever. This patient was not exposed to any peculiarly virulent miasma; for he was still living under the same circumstances as when he suffered an attack of simple intermittent, three weeks before;—one of the commemorative circumstances, however, suggests to us the determining cause of the malignity of cases occurring in ordinarily healthy localities. One of his organs (the brain) was found predisposed to become congested by the high general arterial

action of a paroxysm—predisposed by fatigue and over-exertion coincident with an anxious state of mind. An analogous case is, at this time passing under the writer's notice—a case of chronic diarrhœa of three months standing, from which the patient, a young man of 20, was gradually recovering—when after a week's residence on the bank of a mill-pond, an attack of a quotidian remittent fever renewed the chronic affection of the bowels—the choleric symptoms increasing and abating with the exacerbations and remissions of the fever, and becoming more and more violent in each succeeding paroxysm, until on the 5th, the patient seemed in imminent danger. The antiphlogistic treatment alone, founded upon the opinion that the prominent local disease is the essential cause of the fever, may be demonstrated by the records of practical medicine, to be not a uniformly unsuccessful, but certainly a hazardous one—as hazardous as unphilosophical, for well authenticated cases conclusively establish the principle, that the Intermittent fever is independent of the local inflammation or congestion. Impressed with the importance of this principle, the writer here adduces a case from Bailly, with the remark that such like cases could be multiplied indefinitely.

CASE 4. * “An Irishman, living at Rome, was attacked, in the month of August, 1822, with fever, and extreme pain in the belly. In the morning, when I saw him, he was in a state of agitation, difficult to describe—he was tossing himself upon the bed, with his hands pressed against the belly; screaming from the violence of pain; his tongue was a little white, but neither red nor dry; no thirst; the pulse strong and very full. He was bled 16 ounces from the arm, and twenty leeches applied to the abdomen. In the evening, the paroxysm had abated and a tranquil night ensued. The next day was passed without fever or pain. The third day, in the morning, a paroxysm commenced with a chill, and was marked by the same violent abdominal pains as in the first paroxysm. Bled again to the same amount, and twenty leeches applied to the abdomen; diet and mucilaginous drinks. This paroxysm is terminated as the first, in the evening; the night tranquil. The fourth day a complete intermission. On the fifth day, the paroxysm returns in the morning, but with this striking difference—although agitated as much as in the preceding paroxysms, his complaints as desperate, his restlessness as great, in short, seeming to suffer as much pain, yet he could not designate the

* BAILLY—*Traité Fièvres Intermittentes*, 1825.

seat of his suffering. As his intellect was perfect, I repeated frequently the question—Have you pain in the belly? He uniformly answered me that he had not, and continued to refer his distress to the general state of his system. Judging him to be free from danger, without medication, he passes through the paroxysm, which terminates as before, in a perfect intermission; the calmness of which contrasts strikingly with the anguish and distress of the previous paroxysm. I prescribed 15 grains sulphate of quinine, in three powders, during the morrow. On the seventh day, he experienced a general uneasiness, but not to be compared to the suffering of previous paroxysms. The sulphate of quinine was continued, for a few days, and his recovery was perfect.”

This case distinctly proves the independence of the fever upon the local affection; for by the judicious antiphlogistic treatment during two succeeding paroxysms, this abdominal disease is subdued so completely, that in the third paroxysm, no further antiphlogistics are used; yet the tertian fever continues—continues until arrested by the specific. It shows also the insufficiency of the antiphlogistic treatment, even when it entirely cures the local phlegmasia, to arrest a paroxysmal fever. A case analogous to this is recorded by Morgagni:—“A patient was first attacked with dysentery without fever—then fever supervened, of the tertian type, the dysentery still continuing its course; the intermittent ceased, yet the dysentery still continued; finally a continued fever comes on, with stupor, deafness—death.” We must infer from such like facts as these, that the lesion upon which depends intermittent fever is a specific one of the cerebro-spinal system; and that whilst the local congestions of malignant intermittents are controlled by anti-phlogistic measures, this is controllable with even greater certainty, by the specific quinine.

CASE 5. Oct. 11th, 1842.—A mulatto woman resides at the Academy lot, aged 42, having borne many children, has now an infant of 8 months. Represents herself to have had a chill, on the afternoon of the 9th, followed by fever—was up and about her work on the morning of the 10th; but at noon was taken with a chill, since which she has suffered, up to the present moment, with head-ache, vomiting, pain, &c. This is now (11th Oct., 9, A. M.) her state: skin covered universally with *urticaria*, itching extremely; skin warm; intellect perfect, but her communications are interrupted by violent

pain at the epigastrium, increased at intervals ; no cough except after vomiting ; respiratory murmur perfect, but respiration frequent and irregular, rendered irregular by the violence of epigastric pain, urgent thirst, the tongue of a natural color and moist, perfectly clear at the anterior half, slightly furred behind, where the papillæ are enlarged. At the bed-side is a tin basin, nearly filled with matter vomited, consisting of watery fluid and mucus in large flakes floating upon it, and of a brownish black colour ; pain at the epigastrium increased by pressure ; exquisite pain on pressing third, fourth and fifth dorsal vertibræ ; one stool yesterday ; pulse extremely small, barely perceptible and very frequent. (*One pint of Cold Water at a draught ; V. S. 16 oz.*) Faintness, as was anticipated, followed the bleeding and vomiting of the same dark colored mucus and some perspiration over the upper part of the body. At 10, A. M., she took 16 grains quinine, in solution, which being vomited, with more of the black mucous, another dose was given and retained, and repeated at 11 and at 12 M., and retained. At 12 M., two scarifications to the spine with cups drew 4 ounces blood. Sinapisms over the whole abdomen and spine to be renewed. 11th, 9, P. M. Has retained all the quinine ; has great distress at the epigastrium, with a desire to vomit, the pain less violent than formerly ; sense of suffocation prompts her to find relief by rising up to the erect position ;—is deaf, and has roaring as of waters, in the ears—pulse more developed, 120 ; no stool. (*Cupping the dorsal spine to 3 oz. relieved her head-ache and epigastric distress ; sinapisms renewed to the abdomen and spine ; saline injection. 10 grs. quinine, in powder, at 5 in the morning and at 7.*)

12th, 8, A. M. Has passed a comfortable night—*injection produced two stools—has taken this morning the 20 grs. quinine, in two doses. No vomiting during the night. Pain still, at the epigastrium, but less violent—pulse 110, and moderately full ; nettle-rash has disappeared—thirst still urgent. (10 grs. quinine, at 9. Cold toast-water. Sinapisms to be renewed.)* 1, P. M., no more vomiting—no stool—less pain at epigastrium ; but has a sense of fulness of the abdomen ; pulse 120, soft and full ; skin warm and moist ; deafness and sense of confusion in the head. (*Saline enema, at 2, P. M. Chicken water.*) 9, P. M. Has slept ; still pain at the epigastrium ; pulse 110 and soft ; skin warm ; has taken no nourishment. (*1 oz. castor oil, to-morrow morning.*)

13th, 10, A. M. Has passed a tolerably comfortable night ; has taken and retained the oil ; heavy pain still at the epigastrium ; pulse

100. 4, P. M. Three stools extremely black, so reported by nurse ; pain at epigastrium unrelieved, increased by pressure, which produces also, a sense of suffocation. (*Blister plaster 7 by 9 to epigastrium.*)

14th, 10, A. M. Drawing of blister has relieved pain at epigastrium ; patient relishes cold water and has taken some gruel. Pulse 80, and quick ; tongue furred yellow, but moist ; several stools, during the night. (*Gruel and cold water.*)

16th. Convalescent.

Here is a case of quotidian Intermittent, simple in its first paroxysm ;—but the second continues nearly up to the time of access of the third, with severe local gastric symptoms. At 9, A. M., the symptoms being very urgent, and another paroxysm being reasonably expected to supervene about 1, P. M., and it being apprehended that great danger would arise if that paroxysm were not prevented, the patient, for the relief of the local epigastric symptoms, is bled to fainting, and at the moment of relaxation, the stomach cleansed by an emetic of cold water,—and in anticipation of the period of access, to this distressed stomach is administered 48 grains of quinine in two hours. The effect of this administration is to moderate the violence—to break the force of the succeeding paroxysm, and that without materially aggravating the local gastric symptoms. With continued revulsive applications to the epigastrium and spine, 30 grains of quinine are administered, in anticipation of the paroxysm of the 12th, with the effect of preventing it and curing the Intermittent paroxysmal fever. *But still, the local, phlegmasial affection continues, after the cure of the fever, until it is arrested by a blister drawn upon the epigastrium.*

The previous case proves the independence of the Intermittent fever upon the local affection, inasmuch as the first continues under the use of the antiphlogistic treatment, which cures the local affection. This last case shows the Intermittent fever cured, by a treatment, which did not reach the local inflammation, which latter continued until relieved by the blister.

CASE 6. * “Muller, a soldier, aged 22, of a good constitution, having been discharged from the Hospital about a month previous, was brought back on the 15th January, 1835, in the afternoon. He was in the most profound coma ; the pulse full, large, soft ; the skin not hot ;

* MAILLOT—*Traité des Fièvres*, Paris, 1836.

respiration deep; the physiognomy that of a man asleep; altogether insensible to pinching of the skin. No information on the course of his disease. (*Diet, lemonade; V.S. 15 oz. ; 30 leeches to the jugulars; a small starch, opiated injection, with 60 grains sulphate of quinine, 40 grains quinine in potion, blisters to the thighs, sinapisms to the legs.*) At 8, P. M., the coma continues, but the insensibility less absolute, the skin more warm. (*Bleeding from the temporal artery from 8 to 10 oz. ; 40 grains sulphate quinine, in two doses, at the interval of two hours. Cold fomentations to the head.*)

16th. In the morning, the tongue is slightly gastritic, epigastrium painful on pressure; some remaining heaviness of expression of the face, but the intelligence is restored; during the night, a copious sweat. The patient now relates that he has had five paroxysms of fever, each commencing about 3, P. M., daily—during the fifth he was brought to the hospital—that the first paroxysm was accompanied with violent head-ache and efforts to vomit. (*Diet, lemonade, 40 grs. quinine immediately, at one dose; cataplasm to the epigastrium; cold fomentations to head continued.*) Apyrexia was complete during the day; and in the evening, the state of the patient was very desirable.

17th. Morning—complete apyrexia; no head-ache; no lassitude of the limbs; no stools for many days. (*Diet, lemonade, 24 grains quinine, enemd emollient.*)

18. Convalescent, &c.

This case is worthy of consideration, as shewing the safety of large doses of quinine even in the comatose form of malignant intermittent. Here the administration of quinine commenced at a time, when the patient was in the deepest coma, was continued to the extent of *one hundred and eighty grains, in the course of 36 hours*. Such an administration of quinine, the writer apprehends, would seldom be found necessary in this climate; but such cases are valuable, as fixing the general principle of practice, that quinine may be used in such extravagant quantities, if necessary, and as dissipating that too common prejudice against this heroic medicine, that it disposes to cerebral congestion—that it produces head-ache, and therefore that the existence of head-ache contra-indicates its use. It is curious to observe how much more correct were the opinions of the master-spirits of the profession, as to the effects and mode of operation of quinine, at the time of its first introduction, than those of the great mass of the profession in after times. The reason of this, however, is sufficiently obvious.

The attention of men, whose grand dependance in the treatment of malignant fever, was Peruvian Bark, must have been strongly arrested by the high claims of the sulphate of quinine, and accordingly they subjected these claims to the most severe and candid examination, under circumstances favorable to the establishment of a true opinion as to its merits and its mode of operation. Bailly, e. g. says of it—"If I do not regard quinine to be an antiphlogistic, I am as far from regarding it a stimulant. At Rome, I have taken a hundred grains of sulphate of quinine, in some days; on an attentive examination I have found no marks of irritation, which such dose must have produced, were it an irritant. It is a specific, *sui generis*—a sedative of the nervous system, and only of certain of its periodical and intermittent functions, for it exercises no action either upon sensibility or locomotion, it does not relieve pain or convulsions, except these be dependent on an intermittent excitation of the general motions of the economy. It is the specific sedative of the abdominal nervous system." Soon coming into universal use, the general opinion of its mode of operation was naturally determined by the prevailing doctrine as to the pathology of fever—debility being regarded as the essential foundation of fever, and quinine being observed to cure it, by inference, it was called a tonic; its location in the class of tonics seemed further, to be sanctioned, by the fact that cinchona was at the head of the list. Too often is it thus, that the opinions of the mass, founded in prejudice and ignorance, overshadow the exact and carefully-formed opinions of the true philosopher. And such is the influence of names with mankind, that it is to be apprehended, so long as sulphate of quinine continues to be called a tonic, so long will these unfounded prejudices against its use last. To the existence of such prejudice against this valuable article of the materia medica, the following sentence from Professor Dickson's recently published "Practice," testifies—"Even the sulphate of quinine is generally regarded as inadmissible, whenever the apyrexia is incomplete, and where there are any prominent affections of important organs." He specially instructs his pupils: "Thus, you will hardly venture upon the exhibition of cinchona, when the apyrexia is imperfect, and when there are present obvious marks of local disorder of some important organs. The continuance of head-ache, gastric oppression, abdominal pain and tension—these symptoms demand farther general or preliminary treatment."

CASE 7. Oct. 3d, 1844, Thursday—The patient, a boy of nine years of age, resides immediately on the river, 9 miles above town. On Saturday last, had the radius of the left fore-arm broken; is represented to have had fever on Monday night last; better on Tuesday morning; Tuesday night, restless with very hot skin; Wednesday night, high fever with delirium, copious sweat towards morning. This morning, Thursday, was out of bed, but complained of head-ache; had no appetite; at 12, M. to-day, fever commenced; at 2, P. M. had a strong convulsion, followed by stupor, which lasted till moment of first visit, about 5, P. M.; after convulsion, a tea-spoon-ful of ipecac was forced upon him; since which time he has had several involuntary stools. Now perfectly stupid, not aroused by the loudest calling; occasionally restless, mourning and screaming when moved; pulse 90, soft and full; skin perfectly natural in temperature, except the extremities, which are cool, and the head, which is very hot; pupils dilated; adnata not injected; bowels soft and supple. (*V. S. 12 oz.; scarification between the shoulders, with cups, drawing about 4 ounces; hot mustard pediluvium, every two hours; cold affusion to head every two hours; sinapism the whole length of the spine; two blister-plasters to the legs; to-morrow morning at 5, four grains quinine in solution, to be repeated every hour, for five doses, unconditionally.*)

Left him at 7, P. M., still stupid, with no other marks of returning sensibility, than groaning under the hard pressure of the cups, and great restlessness under the first application of undiluted mustard to the spinal column. Being unexpectedly again in his neighborhood, at midnight, found his consciousness so far restored, that he asks for, and drinks water.

Friday, 4th, 11, A. M. Perfectly conscious; skin cool; has taken 20 grains of quinine, and is deaf and complains of roaring in the ears; fretful from pain of blisters; no stool. (*5 grains blue mass every two hours, for four doses, commencing at 2, P. M.; enema saline, if fever returns; hot pediluvium and cold affusion to the head; 12 grains quinine, commencing to-morrow morning at 5 o'clock, in three doses; oil $\frac{1}{2}$ oz. to-morrow, at 4, P. M., if bowels shall not have been freely moved.*)

Was subsequently informed that he passed the night of the 4th, with but little fever; since which his convalescence has been rapid.

The accident of a simple fracture of one of the bones of the fore-

arm is not sufficient to account for the violent character of this case, in a healthy robust boy. The following facts warrant the belief that this character was determined by extreme virulence of the exciting cause, peculiar to this and some other localities in the neighborhood:—One month before the occurrence of this case, there was a similar one in the same family, treated successfully in the same manner, by Dr. Robert, of Columbia county. In July, 1843, a boy of twelve years, from the city, was on a visit at this house; at the end of two weeks, he was taken with light fever, consisting of daily paroxysms; which having returned for two or three days, it was thought prudent to bring him home; on the morning following a night of severe fever, with delirium, he was so well, that he dressed himself, and begged to remain—on the way down, in a carriage, fever supervened; he arrived at home in a state of profound stupor, in which state he died, notwithstanding the diligent use of appropriate remedies. Two days ago, whilst visiting at the same house, the writer incidentally saw a negro child about five years of age, in a paroxysm of algid fever, which terminated fatally in two hours; this child had been slightly unwell for two or three days, and on this morning had been playing in the yard. A negro woman at this time, was convalescent from a similar attack of algid fever. There are other well known localities in our climate, where the malignant form of fever is endemic. The native of the city of Charleston, e. g. sleeping but one night, in the summer season, in the neighboring country, insures to himself an attack of much-dreaded “Country fever.” From descriptions of this fever, by friends professional and non-professional, and the occasional notice of supposed cases occurring on steamboats, formerly running between this city and Charleston, the writer has long entertained and expressed the opinion, that this “Country fever,” of Charleston, was the Malignant Intermittent or Remittent fever, of Torti, Morton, Bailly, &c.; and that when the profession of that city shall have adopted the uncompromising, unconditional use of cinchona and quinine, as recommended by such high authority, this now formidable disease will be stripped of its terrors, and be found as manageable almost as simple Intermittents. His opinions are confirmed by Professor Dickson’s description of Country fever, which though very general, yet sufficiently shows the true nature of the affection. “An attack commencing as intermittent or single tertian will thus become a double tertian, then a triple tertian, then a remittent of greater or less distinctness and regularity.”

He says again, "Or the remission shall have become very distinct, nay shall amount to complete intermission, and you flatter yourself with the hope that convalescence is begun, when some single paroxysm shall intervene with such overwhelming violence, that prostration and fatal exhaustion ensue in a few hours." The paroxysmal character is here assigned to it—remittent and even intermittent—and that peculiar insidiousness which it has been the writer's object to illustrate, is fully set forth in the last quotation. The treatment mentioned by Professor Dickson is not very exactly specified—he, remarking that his custom is "to institute, from the commencement, such a course of treatment as shall offer the best resources under any sudden developement of malignity or aggravation of violence." But upon the use of the great specific, he immediately adds, "under these circumstances, too, I watch anxiously for the first opportunity of administering some preparation of cinchona—the infusion in some of its combinations, or the sulphate of quinine in proper and efficient doses. The system sinks so readily under such exacerbations, or such accumulation of them, as I have above alluded to, that I *often venture* upon the exhibition of this class of remedies, even in remissions somewhat indistinct and obscure, after the first vehemence of febrile action has passed by and the appropriate measures of depletion have been premised." It is not such a use of quinine, to which the writer alludes, but the *early* use of it, *in full doses*.

Knowing sulphate of quinine to possess the power of preventing the paroxysms of periodic fever, he would anticipate the *first* expected remission—estimating the time of its return, either from the previous history of the individual case, or from the general history of the existing epidemic—by doses of 10 or 20 grains, pressing it "obstinately against contra-indicating contingencies"—that is, acknowledging no such contingencies to exist—seeing in the circumstances generally considered such, only the stronger indications for its use; fearing no danger so much as the danger of a repeated paroxysm.

This is the course of treatment, which the writer feels confident, would offer the best security against those sudden developments of malignity, so characteristic of the country fever of Charleston.

It is with reluctance that the writer, finding this article already so extended, yields to the necessity of postponing his remarks upon Remittent Fever, &c., to some future number of the Journal.

ARTICLE II.

Cases occurring in the Practice of Drs. Ogilby & Robert: Reported by W. H. ROBERT, M. D., of Madison, Ga.

CASE No. 1. Acute Peritonitis.—Mr. J. L. Caverly, a school teacher, aged 27, of tall stature and large frame, gave the following history of his case previous to our visit :

For several days he had experienced a general uneasiness of the whole body, but more particularly of his bowels, locating the pains about the region of the umbilicus, although even here they constituted more an uneasiness than an actual pain. On Friday, seven days previous to our being called to him, he had gone to the country, and very imprudently, eaten heartily of muscadines, shortly after which he was taken with a severe chill. He returned to town the next day. On Sunday, being costive, he took a dose of epsom salts, which operated mildly. The general symptoms not yielding, and still complaining of the uneasiness of his bowels, he continued to attend to the duties of his school, abstaining almost entirely from food, until our visit, on Thursday :

September 19th—when the following symptoms were presented: Skin warm, dry; and of a pale yellow colour; tongue dry, tip and edges very red, centre loaded with a brown fur; forcible pressure upon the bowels caused very little pain, and that was principally about the region of the ilio-cæcal valve; the rest of the bowels had a very knotty and doughy feel; pulse hard and wiry, 115 to the minute; stomach irritable; bowels had not been operated on for the last forty-eight hours. 18 ounces of blood were taken from the arm; R. Calomel 30 grs., opium 8 grs., mix, from mass and divide into eight pills, one to be taken every three hours; diluent drinks, &c.

20th. Symptoms in almost every respect the same as yesterday; did not sleep much; complains of very little pain in the abdomen. Castor oil given, and the operation promoted by enemata. Had several very offensive discharges, of rather a serous consistence and of an ashy colour.

Evening visit—Skin hot and dry; tongue, pulse, &c., as heretofore; stomach still irritable, Calomel and opium pills resumed, with soda powders in cold water.

21st. Rested better; skin cool, but dry; tongue the same as yesterday; bowels a little tympanitic; complains of no pain and only slight soreness on pressure of the abdomen. Calomel and opium continued, with 20 drops chloride soda every three hours; soda water, &c., also a large number of leeches to the abdomen.

22d. Had several small serous and offensive discharges from his bowels during the night; did not sleep well; wandering and delirious; tympanitic state of the bowels has increased; pulse 125 to the minute; treatment continued, with cups to the abdomen.

23d. No material change in the symptoms since yesterday, except an increase in the frequency of the pulse, which is now 140; tongue very dry. Ordered castor oil, which operated twice: discharge pale, thin, and very offensive. Evening visit, ordered following:—
R. Blue Mass, Dover's powders aa. 30 grs., divide into 12 pills, one to be taken every three hours; blister over the abdomen, and to be dressed with mercurial ointment; soda water continued.

24th. He is worse this morning: pulse feeble and 150 per minute; skin cooler; hiccough since early last night, with more constant delirium; tympanitis increased; no pain or uneasiness produced by pressing the abdomen. Ordered, oil turpentine, to be given every two hours, and sinapisms to the extremities. Continued to grow worse, and died that night at 12 o'clock.

Autopsy, sixteen hours after death, in the presence of Dr. E. E. Jones. Upon opening the abdomen, a large quantity of fœtid gas escaped, which dispersed some of the bystanders; the intestines were knotted together from contraction and adhesion of a very highly inflamed peritonium; every part of the peritonium that covered the intestines was in a high state of inflammation; that which formed the omentum was in a gangrenous state, and the right lower edge of the omentum adhered to the peritoneal covering of the right iliacus muscle: on separating these, we discovered a large ulcer of the peritonium, to the right of the ilio-cœcal valve—it measured an inch wide by two and a half long, extending towards the pelvis, in which we collected about one pint of pure pus. The mucous membrane of the stomach and intestine was inflamed, but not so much as the peritonium. The thoracic organs were not examined.

Here we have a case of Peritonitis progressing on to gangrene and suppuration, and the patient complaining of scarcely any pain indeed he attended to his school until a day or two previous to our

first visit. Could the pain have been controlled by the patient's fortitude, or was it really not felt because of a morbid impairment of sensibility? From the extent of the disease, I think it impossible that any man with ordinary sensibility, could have borne it without complaint.*

CASE No. 2. Paralysis, or Loss of Muscular Motion of the right arm.—On the 12th of March last, we were called to see a negro boy about ten years of age, the property of Miss D****, and found him laboring under complete paralysis of the right arm. The boy's mother gave us the following history :

Two nights previous to our visit, something like a noise caused her to notice the boy : she found him somewhat stupid, partially blind, and unable to move the right arm. He remained in this condition until our visit, about forty hours after.

The patient then presented the following symptoms:—Stupor, such as to render it difficult to arouse him ; pulse firm and slow ; bowels costive ; complains only of pain in the head. We bled him generally and locally ; blistered the nape of the neck ; ordered mercurial and aloetic purges—his bowels were all the time very difficult to move. This treatment was pursued ten or twelve days, without any improvement. We then put him under the operation of the electro-galvanic battery, the operation of which was confided to his young master, to be made daily.

April 12. I happened to be in the neighborhood, and called to see the boy. I found him almost entirely relieved: he could throw a stone about as far as he ever could, and the only difficulty was a little weakness of the arm. The use of the battery was shortly after discontinued.

June 17. The arm has been gradually improving, and there is now scarcely any difference between it and the other.

* See Dr. Carr's Article under head of Extracts. Was this not a case of disease originally located at the Cæcum ? May there not have been some of the muscadine seeds lodged in the Appendix?—EDTS.

ARTICLE III.

A Case of Lumbar Abscess. By E. M. PENDLETON, M. D.,
of Sparta, Ga.

An extract in the March No. of the Southern Medical and Surgical Journal, from Dr. Oke, of Southampton, defining the diagnosis between several diseases, which produce pain in the loins, has directed my attention to a case, occurring in my practice during the last autumn, and which strikingly exemplifies the difficulty, as well as necessity, of a correct diagnosis in all such cases.

I first saw the patient on the 21st November last. He was a farmer, residing near this place, about thirty-five years of age, and was in the following condition ;—Countenance depressed, indicating pain and anxiety of the mind ; pulse very feeble and thready ; voice weak ; great emaciation, &c., reminding one of the last stage of phthisis pulmonalis. He lay on his back, could not move himself except when assisted, and then only with great pain ; his whole complaint was referred to the lumbar region extending down the left hip to a little below the joint ; he had severe diarrhoea, his stools indicating considerable derangement in the biliary secretions. The urine was passed freely, and without difficulty, and the appetite but little impaired. On examination, I found two small tumours occupying each side of the lumbar vertebræ which evidently contained matter. There was slight tenderness and fluctuation also extending down the left hip to the upper and outer part of the thigh. I could not hesitate for a moment as to the nature of the case, and directed my treatment accordingly.

The following is a succinct history of the case, as given by the patient, and his attendants previous to this time :—Sometime during the month of May, 1844, he was attacked with pain and weakness in the lumbar region after considerable exposure to cold, damp weather ; he applied for relief to an experienced and skilful physician, which was but partially afforded. A fresh exposure produced a recurrence of the pain, and though subsequently treated for acute nephritis and lumbago, only a mitigation of the symptoms was obtained for a time. He continued to grow worse and waste away until the latter part of August, when he became perfectly bed-ridden, suffering the most intense pain, and giving up all hope of recovery.

As a dernier resort, however, finding that science had failed, he had recourse to empiricism. A notorious steam doctor was sent for, who having exhausted the routine of No. 6, *composition*, *lobelia* and *steam-bath*, gave up the case as utterly hopeless, declaring to the alarmed and awe-stricken patient, that he could have cured him, but one of his kidneys was entirely destroyed, and he could not make a new one.

I will merely give the outlines of the treatment instituted in the case. My attention was first directed to the diarrhoea, which was very exhausting. This I succeeded in checking in the first twenty-four hours with powdered opium. I next corrected the biliary derangement by blue pills and a large blister over the right hypochondriac region, where there was pain and tenderness on pressure, and then directed my attention to strengthening the patient. Fearing lest a too speedy abstraction of matter might be too much for his extremely weakened state, I applied blisters over the tumours, and upon the tender point down the thigh, that external suppuration might go on gradually, while I plied the exhausted powers of the constitution, with wine and a nourishing diet, hoping to restore its recuperative energies, in some degree at least, before operating.

Night sweats supervening in a few days, I added about ten drops of elixir vitriol to the wine, to be taken thrice daily. The blue pill was continued until ptialism was produced, and the blisters applied and re-applied with but little effect, except the one on the hip, which seemed to suppurate considerably. Early in December, the tumour broke at the upper and outer portion of the left thigh, and ran an immense quantity of pus during several succeeding weeks. The tonics were gradually increased, and my patient commenced to improve. By the 30th December, (my last visit,) the tumours had entirely disappeared, and firm and healthy granulations taken their places, and the issue on the thigh nearly healed up. He had also been able to sit up a little. Subsequently he continued to invigorate very fast, and was soon able to go about and attend to his business. He however complained of considerable weakness of the left side, no doubt occasioned by the shrinking, from long inertia, if not partial loss, by suppuration, of some of the cellular tissue, &c., about the hip.

The chief points of interest in this case are, first, its Etiology. The patient had received an injury in the loins a number of years since, from a fall, which had produced weakness and occasional pain ever since. I believe it is generally conceded, that exposure to alterna-

tions of temperature, or any other cause which tends to produce inflammatory action in the system, will always attack the weak part first. I regard, then, in this case, the injury as the remote cause, inducing a preternatural weakness of the parts; and the exposure to cold as the proximate cause superinducing an inflammatory action about the muscles and the cellular texture beneath, which, from the failure of antiphlogistic treatment in the outset, terminated in suppuration and lumbar abscess.

Next, the Diagnosis. No scientific physician had seen the patient for near two months prior to my being called in. Hence, I apprehend the case to have been more difficult of diagnosis in the early stages than when I first saw him. As the pain in each loin was immediately over the kidneys, and psoas abscess is so unfrequent in this country, the attention of the physician should have naturally been directed to nephritis first. But when he ascertained that the secretion of the kidneys had not been disturbed in the least, it would not be strange for him to recur to lumbago or some spinal affection for a solution of the difficulty. Had I formed a hasty diagnosis, founded upon preconceived notions and a casual examination, the true pathology of the disease would have remained undiscovered, and by consequence, the treatment of such a character, as to endanger the life of the patient. I first ascertained that the lungs, stomach, liver, kidneys, and all the important viscera of the system were not materially diseased: when by careful examination and pressure upon the loins, I detected deep seated fluctuation, the problem was at once solved, and the case made out. I was enabled to encourage the patient to hope for life.

The third point of interest, is the treatment. An immediate opening of the abscess, (as a physician subsequently told me should have been his course,) would, I am sure, have effectually prostrated the patient. However difficult may be the rationale of the thing, facts have established the principle in pathology, that a large quantity of fluid, whether water or pus, suddenly abstracted from the system, produces debilitating effects. The draughts made upon the vital powers (already so much weakened by disease) to restore the lost fluid to the system by the secretive process, produces a prostration from which none but the strongest constitutions may hope to recover. Such was the fact in a case which I saw while at Lectures, operated on by Professor F——. He mentioned his apprehension to the class at the time, although the patient was able to walk about, and

seemed to have considerable strength. A large quantity of matter was abstracted, and in two days the patient was dead. This, and another case of a similar character and history, decided me in delaying the operation, (until the very last point of time,) and instituting a course of stimulants and tonics, that I might strengthen, if possible, the recuperative energies of the system, so as to aid nature in throwing off the extraneous matter in a more gradual manner than could have been effected by surgical interference. The blisters aided our efforts considerably by their counter-suppurative effects. In reviewing the history, pathology and treatment of the case, we are constrained to believe that the recovery of the patient turned mainly on the constant administration of stimulants and tonics, and the refraining from a sudden abstraction of the matter, while yet the system was unable to sustain itself, under an exhausting issue, of a deep seated and large abscess.

ARTICLE IV.

Extirpation of a schirrous tumor, the patient being in the Mesmeric state, and evincing no sensibility whatever during the operation.
By L. A. DUGAS, M. D., Professor of Physiology, &c., in the Medical College of Georgia.

Mrs. Clarke, the lady whose mamma I removed in January last,* enjoyed for several months afterwards an unusual degree of health. In the month of May, however, she began to suffer almost daily with slow fever, and perceived a small induration in the adipose tissue surrounding the region formerly occupied by the breast. This soon assumed the form of a distinct tumor, which was increasing in size with some rapidity, and was becoming painful, when, in the early part of June, I advised Mrs. C. to have it extirpated. To this proposal she readily consented, remarking very philosophically, that she would rather have such a tumor removed every six months, than permit it to remain and grow on her. There was no evidence of disease in the axilla.

I now requested Mr. Kenrick to ascertain whether he could still

* Case published in the March No. of this Journal.

mesmerise her, and, if she were susceptible, to repeat the operation a few days, so that we might test her sensibility in that state. Mrs. C. was readily put into the mesmeric state, and found to be entirely insensible during its continuance. Deeming it unnecessary to repeat the tests, I determined to operate on the 13th June, several days sooner than was expected by either herself or her friends. The operation was performed in presence of Professors L. D. Ford and Jos. A. Eve, Drs. L. Kennon and J. F. Hammond, the Rev. Mr. Alfred Ford and Mr. F. J. Martin. The patient was mesmerized at 9 o'clock, A. M., and the extirpation effected at about 10 o'clock, by making a semilunar incision along a portion of the circumference of the tumor, turning over a flap, and dissecting away the indurated mass and surrounding tissues, making up the volume of a hen's egg.

During the operation, Mr. Kenrick, being blind-folded to avoid the unpleasant spectacle, sat by the patient, with her hands in his. Mr. K. avers that Mrs. C. evinced no uneasiness by grasping his hands, that her fingers did not twitch, and in short, that her hands remained perfectly passive. Prof. Ford, whom I had requested to note the pulse and respiratory act particularly, informs me that there was no appreciable change in their character and frequency before, during and after the operation. The countenance of the patient and the hue of her cheeks presented no change whatever, nor was there the least indication of sensibility detected during or subsequently to the operation, by those who were present and anxiously watching the result. There was neither twitching of the pectoral muscle when touched with the sponge, nor tremor of the lower jaw. Indeed the patient slept on as quietly as an undisturbed infant, through the entire operation.

The wound was left open about half an hour, a small vessel ligated and the ordinary dressing applied. The patient was permitted to sleep on, and awoke spontaneously at a quarter-past 1 o'clock, P. M., in the presence of Dr. Ford, the Rev. Mr. Ford, Mr. Kenrick and myself. Dr. Kennon arrived a moment afterwards. She appeared entirely unconscious of what had been done, and was much surprised as well as gratified, on being informed that the operation was over. She stated that she had not suspected our design, and had no recollection of having experienced the least uneasiness during her nap.

I will add on this occasion, as I did on reporting the former case, that the above statement has been submitted to all the professional gentlemen present, and that they fully concur in its accuracy. This

is perhaps the only instance on record in which a serious and painful operation has been twice performed on the same individual in the mesmeric state, a circumstance that may lend it additional interest with those who are disposed to collect facts on an interesting subject.

AUGUSTA, 1st July, 1845.

PART II.—REVIEWS AND EXTRACTS.

Cases illustrative of the Diseases of the Cæcum and its Appendix.

By EDSON CARR, M. D., of Canandaigua, N. Y.

The cæcum has manifestly an individuality both of function and disease—having offices to perform in some respects quite peculiar to itself, while it is subject to frequent derangements and fatal diseases, in which no other portion of the digestive apparatus is implicated.

While the former have received far less consideration than their relative importance would seem to demand, the latter can scarcely be said to have a place in our systematic practical works.

A Monograph by Dr. John Burne, an article in Copland's Dictionary of Practical Medicine, and the cases which are detailed in Dupuytren's Clinical Lectures, embrace nearly all that has fallen under my notice upon this interesting class of affections; with the exception of single cases which occasionally appear scattered through our periodicals.

If we take but a very superficial view of this organ, its situation and capacity, its attachment to the parietes of the abdomen, so confining it that its relative position admits of no change, and the circumstance that its contents are moved forward in opposition to the laws of gravitation, it must be evident that the alimentary substances were designed to remain here longer than in any other portion of the alimentary canal.

These considerations have very naturally suggested the idea that the cæcum constitutes a kind of second stomach.

Again, if we examine a little more carefully into its organization, we find the cæcum liberally furnished with large follicular glands, evidently designed for the abundant secretion of important fluids, while the entire organ, with its appendix, is more richly supplied with arterial blood than any other portion of the intestinal canal. It appears from the experiments of Tiedemann and Gmelin, that these follicular glands "secrete an acid, albuminous and solvent fluid, which mixes with, and promotes the digestion of those portions of aliments which have withstood the action of the stomach and small intestines, or have been insufficiently changed by them." We may

also remark that the contents of the alimentary canal first acquire their peculiar fecal odor in the cæcum. This, according to the researches of the same physiologists, depends upon an oily volatile substance secreted by the mucous follicles. And we think it highly probable that the appendix performs an important part of this work, since, when examined in its natural condition, it is generally found to contain a portion of this material. Indeed, we think it would be difficult to assign a more probable function to this organ; inasmuch as its formation is such as to preclude the idea of the alimentary substances entering it, while the large supply of blood sent to it must plainly bespeak for it a more important office than merely affording a convenient retreat for such unlucky cherry stones and the like, as may chance to escape from their destined course.

It farther appears probable from the experiments of Tiedeman and Gmelin, that the cæcum performs the additional function of secreting "chiefly from its numerous follicles, an unctuous fluid for the protection of the surfaces of the large bowels from the irritating effects of the fecal matters passing along them," and that the constituents both of this and of the other secretions poured out from its surface, consist of elements which require to be eliminated from the blood; so that, in addition to its other functions, it is also a depurating organ.

We may reasonably infer from the foregoing considerations that the cæcum is an important organ, whose functions can neither be suspended nor suffer material derangement, without serious detriment to the animal economy.

My own observations lead me to apprehend that such disturbances occur much more frequently than it has generally been supposed. Such suspension or modified function may result from various causes, as defective nervous stimuli, the unnatural stimulus of crude undigested food, unhealthy secretions of the primæ viæ, or sympathetic relation with some other organ, in a pathological condition. The following case will perhaps sufficiently illustrate the most simple form of such derangement:

CASE I. Mrs. B., now thirty-seven years of age, experienced slight inconvenience early in the summer of 1828, from dyspeptic symptoms, which readily subsided under a regulated diet. From early childhood to that period, she had never suffered from any serious indisposition. She soon lost her ruddy complexion, her usual elasticity and strength began to decline, her lips and tongue became pale, and a general disinclination to physical and mental exertion soon followed. But the more remarkable circumstances manifested in this case, are a slight uneasiness seldom amounting to pain, frequently felt in the region of the cæcum, and ascending colon, attended with an evolution of gas which escapes entirely without odor, while the fecal matters, which are quite natural in appearance, with the exception of perhaps being slightly softer than common, are generally entirely wanting in fecal odor.

This state of things has continued with but short intervals of interruption for more than sixteen years. During this period she has had a good appetite, with no unnatural thirst, and daily motions of the bowels without the use of medicine. The uterine functions have been uniformly healthy. She has borne four children during the time. Menstruation has never been interrupted except during pregnancy and nursing. It has never varied materially in time, quantity or quality, and has never been attended with pain or any appreciable constitutional disturbance. She has never suffered from leucorrhœa, or indeed from any other indisposition than the above described.

Several intelligent members of the profession have been consulted in this case, and the functions of every organ in the body have been faithfully interrogated and carefully watched, and yet no one has been able to form a satisfactory opinion as to the cause of these peculiar phenomena.

The observations of Dr. Copland upon the functional derangements of the cæcum, seem to throw some light upon this and similar cases, and make it appear at least probable that these peculiarities depend on such derangement. If the views which are entertained in regard to the functions of the cæcum be correct, there will be no difficulty in coming to such conclusion.

I might here introduce several other cases which would seem to confirm the correctness of the views above presented, but perhaps this may be sufficient to direct the attention of other and more competent inquirers to its investigation.

I will however remark, that I had an opportunity about a year since, of making an examination of a case in which the leading symptoms had for a long time been similar to the one already described. In this instance, death was occasioned by the sudden super-vention of acute gastro-enteritis. The lower part of the ilium, the cæcum, and a small part of the ascending colon were found very much hypertrophied, the parietes of the cæcum measuring over two lines in thickness, while the cavity of the appendix was so nearly obliterated as barely to allow the introduction of a small probe.

Dr. Copland remarks, that "when the vital energies are weakened and the alimentary canal debilitated, the cæcum often betrays greater disorder than any other part of the digestive system. Its situation and functions will account for the frequency and importance of its diseases. In some cases, the irritation produced by morbid or accumulated matters in it are slight, and readily productive of sufficient reaction of its muscular coats to propel them along the colon. In other instances, the efforts made to accomplish this end, owing to the obstructions occasioned by the lodgment of flatus about the right flexure of the colon, or by irregular spasmodic contractions of this bowel, are ineffectual, and give rise to colicky pains. If the interruption is removed, disorder soon subsides; but if it continues for any considerable time, the more violent forms of colic or ileus supervene."

The two following cases, while they corroborate the foregoing re-

marks, have some points of peculiar interest as illustrating the fact, that the bowels may be freely evacuated with active cathartic medicine, while substances remain impacted in the cæcum undisturbed.

CASE II. On the 7th Aug., 1835, I visited Saugur Brockelbank, a lad thirteen years old, who had complained for two or three days with colicky pains. He had taken salts, castor oil and cathartic pills, which had operated well, but without relieving the pain.

I learned that four days previous to this time, he had eaten freely of choke cherries (*prunus virginiana*). On examining the abdomen, he seized my hand as it approached the right iliac region, exclaiming that it was very sore. Careful examination discovered a distinct circumscribed fullness and hardness over the cæcum. He complained of thirst and head-ache; pulse eighty-four, and rather hard.

Pres. v. s. ζ xv., calomel ten grs. to follow in three hours, with castor oil. Warm fomentations to the bowels.

8th. His bowels have been freely moved several times. Soreness over the cæcum still continues; pulse ninety-two, v. s. repeated; calomel four grs., with one-eighth gr. morphine to be repeated every six hours. Blister to the seat of the soreness.

9th. Bowels have not been moved since yesterday; pulse ninety-two; tongue slightly coated with a white creamy covering; pres. calomel five grs., to be followed with castor oil in four hours. Blister to be dressed with warm poultice of slippery elm.

10th. Soreness rather increased; bowels moved, but slightly; pulse ninety-four, small and quick; pres. calomel and Dover's powder, each three grs. every four hours, and fomentations to the bowels.

11th. Has had two slight motions of the bowels—without fecal odor. Calomel and Dover's powders continued; blister renewed and to be dressed with slippery elm poultice.

Evening. His bowels have been moved several times during the day; no fecal odor; complains of thirst, tongue heavily coated but not dark; five grs. of Dover's powder every four hours.

12th. Relieved from pain by Dover's powder, but not otherwise improved; calomel and Dover's powders every four hours, blister renewed.

13th. Tongue more thickly coated; pulse ninety-six, small and quick; pres. cal. five grs., to be followed in three hours with salts and senna, and in three hours the following enema to be administered:

B. castor oil ζ ij., spts. terebinth ζ i., warm water one pint.

Evening. The bowels have moved freely several times during the day. The evacuations contained what the mother termed "a handful of cherry stones, which had remained so long that they smelt very bad."

From this time the soreness began to subside, and his recovery was rapid and uninterrupted.

Can there be any doubt that in this case, the cherry stones were

lodged in the cæcum during the nine days which intervened between the time of eating and discharging them?

CASE III. At 1, A. M., August 17, 1840, I was called to R. B., aged 20. He complained of excruciating pain in the abdomen, with nausea, retching, anxious countenance, features much contracted, pulse 110, quick, small and tense; the whole abdomen extremely painful to the touch. He had been troubled for several days with diarrhœa, attended with occasional griping pains. For the last twenty-four hours, he had felt a dull aching pain in the bowels, which was increased while in the erect posture, and greatly aggravated by any slight jar, as in walking. But the severe pain came on suddenly on rising from his bed just before I was called, at which time he experienced a smart chill. I took from the arm thirty-six ounces of blood, gave him fifteen grains of calomel combined with one-half grain of morphine, and hot fomentations were applied to the bowels. 6 o'clock—pain and nausea slightly relieved, but the soreness of the bowels continued. Bleeding repeated to twenty ounces, which occasioned fainting: calomel ten grs. and Morphine one-half gr.: fomentations continued, and a mixture of calc. magnesia 3ij, aromat. syrup of rhubarb, ʒi; to be given in three hours.

2 P. M., pulse 127. Soft and compressible, pain much relieved. By means of a flexible tube passed into the colon, the following enema was administered:—R. castor oil, ʒij; spts. turpentine, ʒi; warm water, three pints. This passed off in the course of three hours, with some fecal matter.

9 P. M., pain much diminished and entirely confined to the right iliac region, where a distinct circumscribed fulness and hardness was perceptible. Calomel, three grs.; morphine, one-fourth gr.; to be given every four hours.

18th. Morning. Pain, soreness and swelling over the cæcum, considerably increased; pulse 130, small and quick. An injection of warm water and castor oil produced a small fecal evacuation, without odor. Calomel and morphine continued; about four oz. of blood was taken from the region of the cæcum by cupping, and fomentations to the seat of pain.

2 P. M. Pain somewhat relieved; blister applied to the seat of pain.

9. Evening, pain much relieved. Injections repeated, but with slight effect—calomel 3 grs., Dov. powder 4 grs., to be given every four hours. Blister to be dressed with slippery elm poultice.

19th. Morning. Rested well: free from pain, pulse 120, soft and compressible. Tongue slightly covered with moist white fur. A mixture of castor oil, ʒi., and an equal quantity of aromatic syrup of rhubarb, to be given directly.

2 P. M. Has had rather a scanty evacuation, tinged with bile, with slight fecal odor; feels much relieved.

8 o'clock. Evening. Pulse 110, soft and compressible; bowels

have been freely evacuated; fæcal odor, strongly marked. 5 grs. Dov. powder to be given for the night.

20th. Morning. Has had a tolerable night's rest; pulse 110; bowels acted freely; complains of soreness, and some deep seated pains in the region of the cæcum. Blister dressed with mercurial ointment.

Evening. Pulse 100; swelling and soreness still continues; camphor and opium pill to be given at bed time. Mercurial dressing continued.

21st. Still complains of dull, deep seated pain; pulse 100; camphor and opium pill; mercurial dressings continued.

Evening. Pain continues; pulse more full and hard; tongue more coated, with edges very red; colon distended with ziv. castor oil, in five pts. warm water. This brought away an apple seed, with some flakes of hardened fæcal matter which appeared as if broken from a hard mass. Pres. Dov. powder and calomel *aa* 5 grs. to be repeated every four hours.

22d. Morning. Has had a quiet night; pulse 100; tongue looks better; swelling and soreness much relieved; skin has been in a moist state during most of the night. Has had a large evacuation of offensive fæcal matter, with several hardened lumps in which were found a number of whole, unripe blackberries. On inquiry, no fruit of the kind had been taken since the Saturday, a week before his illness.

Evening. Has had several evacuations during the day, with fragments of hardened fæcal matter, containing numerous seeds of blackberry.

From this time he began gradually to recover, although it was several weeks before the soreness and swelling had so far subsided as to allow of his returning to business.

He has since had several slight attacks of pain and soreness in the region of the cæcum from error in diet, which have readily yielded to prompt treatment.

We may remark that in both of these cases, during the time in which foreign substances remained impacted in the cæcum, although the bowels had been repeatedly freely acted upon by medicine, there was almost an entire absence of fæcal odor in the alvine discharges. I have noticed the same circumstance in several other similar cases, and recognized the reappearance of the odor, as one of the earliest symptoms of anything like permanent relief.

CASE IV. On the evening of the 29th of August, 1835, I visited Miss ———, a young lady, 16 years of age. She had suffered from slight headache, for two or three days. Four days previous, while walking in the garden, she had taken several unripe plums, since which time she has had no motion of the bowels. I attributed her headache to this circumstance, and directed castor oil and aromatic syrup of rhubarb, of each one ounce.

30th. She has had no motion of the bowels : headache continues : *pres. R. Calc. magnesia 3i.; spts. ammon. aromat., 3i.; mint water, ʒi.;* to be taken directly, and repeated in three hours if required.

Evening. Medicine has had no effect, and the following was ordered ; calomel 8 grs., *com. ext. colocynth 12 grs.,* and should this have no effect, it may be repeated in six hours.

31st. Her medicine has had no effect ; complains of pain in the bowels. On examination, I discovered tenderness and slight fulness in the right iliac fossa. *V. S. ʒxvi. fomentations to the abdomen* and an enema to be administered directly, and should there be no motion of the bowels in three hours, the following mixture to be given : *castor oil, ʒi, aromatic syrup of rhubarb, ʒss,* with the addition of two drops of croton oil.

From this time to the third of September, being ten days from the time she had taken the plums, although ordinary means have been resorted to, such as bleeding, blistering, warm baths, enemas and active cathartics, no passage of the bowels had been effected.

At the request of Dr. Bristol, who was now called in consultation, the croton oil, warm bath and enema were repeated, but all with no effect.

Sept 4th. The soreness and pain have increased during the night tongue loaded with a heavy white coat ; pulse 88, quick and small : calomel and Dover's powder each three grs. every three hours. About noon she experienced a smart chill, which was followed by severe pain and exquisite tenderness, which spread rapidly over the whole abdomen.

Drs. Cheney and Bristol were now called in consultation. The stomach had become so irritable as to reject every thing taken into it, and the rectum so sensitive, that enemas by an ordinary syringe could not be retained, and it was proposed to distend the colon freely by means of a long flexible tube. In attempting to pass this into the colon, I met with a difficulty which I had frequently encountered in similar attempts.

When the tube reaches the angle which the intestine makes, in passing over the *psosas* muscle and common iliac artery, it meets the side of the gut, nearly at a right angle, and after forcing the intestine before it as far as its loose folds at this point will allow, the tube is doubled upon itself, some two or three inches from its point, and broken. That this is the nature of the difficulty, which frequently occurs in passing a flexible tube into the colon, I have satisfied myself by laying open the abdomen of the dead subject, and introducing it with the intestine exposed to view. Indeed, I think it requires especial good luck, as well as dexterous manœuvring, to be able in all cases to pass an elastic gum tube into the colon, although from the representations of Mr. O'Beirn and some others, it seems quite otherwise.

In order to satisfy myself whether there was any unnatural obstruction in this case, I took a common rectum sound, and passed it

into the colon without difficulty. It now occurred to me that a flexible metallic tube, made in shape similar to the sound, might be introduced without trouble. I accordingly prepared one the size of a large catheter, with an egg-shaped bulb upon the end, pierced with several holes like the tube of the womb-syringe—passed it into the colon, attached it to the tube of Reed's double valve pump, and gradually distended the colon with a mixture of castor oil ʒiv. , spts. turpentine ʒi. and five pts. warm water. This soon passed off, and with it a large quantity of dark fæcal matter, containing several balls of black, hardened fæcal matter, about the size and in appearance not unlike the black walnut. The evacuations were attended with alarming fainting, but were soon followed by relief from all pain and threatening symptoms.

The three preceding cases, I apprehend, furnish us with examples of the most common causes of acute inflammation of the cæcum, viz. foreign indigestible substances, or hardened fæcal matter, impacted in the caput coli.

Mr. John Burne, Physician to the Westminster Hospital, in an article published in the 20th vol. of the *Medico-Chirurgical Transactions*, has given a history of eight very interesting cases of this disease. He tells us he has seen not less than twenty cases, in all of which he has not seen a single example of the idiopathic inflammation of the cæcum from the ordinary general causes—exposure to the vicissitudes of weather, &c. "But every instance has been symptomatic of some mechanical exciting cause, as the lodgment of undigested food, of fruit stones or of concretions which the structure of the cæcum and appendix favors; and hence the peculiar features of the disease." It not unfrequently happens, that after an attack of acute inflammation of the cæcum, induced by some foreign substance impacted in its cavity, the natural powers of the organ are but slowly regained; hence it is subject to renewed attacks from any trifling error in diet, or slight exposure to cold. Such cases often become exceedingly troublesome and difficult to manage. The following is an instance of the liability to a recurrence of this kind:

CASE V. On the evening of June 13, 1843, Miss E. J. W., aged 17, was seized with pain in the bowels, which was attributed to her having eaten freely of unripe gooseberries during the preceding afternoon. I saw her early on the morning of the 14th. Her countenance was indicative of severe suffering. She had taken a full dose of Gregory's Mixture (magnesia, rhubarb and ginger), which was rejected. The pain was referred to the umbilical region; pulse 88, full and sharp; pres. V. S. ʒxx. calomel gr. 10. Morphine gr. $\frac{1}{4}$. Hot fomentations to the abdomen.

I saw her again in three hours. Her medicine had been retained, although there had been some retching. Pulse 84, pain somewhat abated; pres. calomel 5 grs. Morph. 1.3 gr. Fomentations continued.

3 o'clock, P. M. She complains much less of pain. Skin moist;

tongue slightly coated with moist white fur; pulse 84, soft; pres. half a Seidlitz powder, to be repeated every hour, in hot water. Fomentations to be continued.

9 P. M. *Médecine* has been retained, but there has been no motion of the bowels. Slight pain still complained of in the umbilical region. Abdomen soft; moderate pressure occasions no pain except over the cæcum, where there is an evident fulness, quite tender to the touch. Pres. an enema of castor oil and warm water, to be administered directly. Cal. and Dov. powd. each grs. iii., to be given every four hours. Fomentations to be continued.

15th. She has passed a comfortable night; had a slight motion of the bowels soon after the enema, with some dark fecal matter. The pain has entirely receded to the right iliac fossa, where it remains constant but not severe. Soreness not diminished; tongue more thickly coated, but white and moist. Pres. blister over the cæcum. Half a Seidlitz powder every hour and an enema to be repeated every third hour, until free evacuations shall be procured.

Evening. She has had several small evacuations of a greenish fluid with no solid fecal matter. Pres. 5 grs. Dov. Powder., to be given every three hours. Simple dressing to the blister, over which is to be laid a warm bran poultice.

16th. She has had a quiet night, free from pain. Skin moist. Pres. The following enema to be administered directly: Castor oil ℥ij., spirits turpentine ℥ij., warm water two pints.

2 P. M. In the course of the forenoon, she had several evacuations of dark fecal matter in which there were several hard masses containing portions of several partially digested gooseberries. Pres. Half a Seidlitz powder every two hours.

Evening. She has had several evacuations of greenish fecal matter during the afternoon. Pres. 5 grs. Dov. Powder.

17th. Convalescent.

On the 8th of June, 1844, a similar attack occurred after eating unripe, or but partially ripened cherries. Under a similar course of treatment she got relief on the 4th day after the attack, but the soreness and tumefaction subsided much more slowly than in the first instance.

On the 14th of Sept. following she was seized in the same way—but the case proved much more obstinate than in either of the former attacks, yielding to the treatment on the 15th day after its commencement.

On the 3d of Dec. of the same year, she had a recurrence without any known cause, except a bad cold, under which she had been suffering several days. This lasted until the 21st, or eighteen days from its commencement. From this time until the following spring, she was constantly troubled with constipation of the bowels, attended with flatulence, together with more or less tenderness and pain in the cæcum and ascending colon. Her general health suffered materially until the 23d of April, 1845, when she had another attack,

attended with more acute inflammatory symptoms than either of the former, involving the peritoneum to considerable extent. This occurred in three or four hours after eating boiled cabbage. By the use of an emetic most of this was thrown off from the stomach, in an undigested state, together with a quantity of green bile. The inflammation subsided, under active treatment, in the course of six days, and the bowels slowly regained their natural powers so far as to be comfortable under a carefully regulated diet, with the occasional use of tonic laxatives.

We occasionally meet with instances in which the vermiform appendix seems to be the principal seat of the primary disease. This is generally occasioned by the accidental intrusion of some small, hard substance into its cavity, which its free communication with the cæcum readily allows; while there is no way of escape but by a retrograde movement. Whether this organ has the power of expelling offending matter in this way or not, it is well known that they sometimes become impacted in this narrow tube, giving rise to irritation and inflammation, which result in perforative ulceration of its coats with most disastrous consequences.

Mr. Copland mentions having seen four cases of this description, where the appendix was primarily and chiefly affected, owing to hard substances having escaped into it. All of these cases terminated in general peritonitis and gangrene of the appendix.

It appears from his description of this affection, that in the cases which he has seen, the symptoms from the beginning were more acute than in inflammation of the cæcum itself.

Two well marked instances of this affection have fallen under my observation, one of which was occasioned by the presence of two biliary concretions lodged in the appendix. The symptoms in these cases were less urgent than in those related by him; although the sequel was the same.

CASE VI. This occurred in a young man about 17 years of age, while attending school at the Canandaigua Academy. I first saw him on Tuesday, June 6, 1837. He complained of sickness at the stomach, and pain in the umbilical region. He attributed his illness to the eating of oranges on the previous evening. I gave him calomel and rhubarb, of each 10 grains in powder, and directed hot fomentations to the abdomen.

I called again in four hours. The sickness had subsided and pain somewhat abated; gave him castor oil and aromatic syrup rhubarb each 1 oz.; fomentations to be continued, and a copious enema to be administered in three hours.

7th. The bowels have been freely moved; still complains of pain about the umbilicus. On carefully examining the abdomen, I discovered tenderness on pressure deep in the lower part of the right iliac fossa; no febrile movement has manifested itself.

I applied a blister to the right ilio-inguinal region, and directed

calomel and Dover's powders, each 3 grains, to be repeated every four hours.

Evening. Several times during the day he has rejected from the stomach small quantities of greenish watery fluid, which has left a slight stain upon the tongue. The blister has filled well; Dover's powder and calomel to be continued through the night.

8th. Rested well during the night; pulse 76, soft. Skin moist; thin white coat upon the tongue; not dry; no pain, but little soreness; blister looks well. I gave him ten grains of calomel to be followed in three hours, with a draught of infusion of senna and Epsom salt.

Evening. His medicine has operated several times during the day. The evacuations contain a large quantity of dark fecal matter but without fecal odor. He expresses himself as feeling relieved. Directed Dover's powder for the night.

9th. Had a quiet night. No pain, but some soreness in the right iliac region. Heavy white coat upon the tongue; pulse 78, and soft, and yielding readily to slight pressure. Has had a small evacuation from the bowels. No fecal odor; blister reapplied. A seidlitz powder to be given every three hours.

Evening. Bowels have been moved several times, evacuations not examined. Entirely free from pain. I spent more than an hour with him, in company with some friends, who had called on him. He left his bed and walked to his chair without assistance. Conversed freely, and desired permission to ride to his friends the next day—a distance of 10 miles—which I advised him to defer for a few days. Everything seemed quite favorable, excepting a very heavy, white, clammy coat spread entirely over his tongue. A Dover's powder was the only medicine prescribed for the night.

10th. I was called to him very early this morning, and found him in articulo mortis.

On post-mortem examination, assisted by Dr. Bristol, there was found in the pelvis about half a pint of purulent matter. The vermiform appendix presented an opening about one inch from its attachment to the cæcum, in which lay a bilary concretion about the size of a common white bean, and nearly of the same shape. On raising the appendix it separated from the cæcum, and was found in a gangrenous state through its whole extent. About half an inch above the ulcerated opening already mentioned, there was an enlargement of the appendix in which was found another concretion of about the same size and appearance. On carefully cutting open the concretions, they were found to be composed of concentric layers of dense bilary concretion around a common centre of the same material. Marks of recent inflammation were traceable to a great extent, over the peritonium as well as the small intestines.

The most remarkable feature in this case, is the amount of organic lesion of so destructive a character, with no more urgent symptoms.

In the other instance of this description of disease to which allu-

sion has been made, the symptoms were more nearly allied to those of strangulated hernia. The appendix was found imbedded in a mass of omentum, greatly hypertrophied, and in a state of ulceration. The cavity of the appendix was nearly obliterated by a thickened condition of its mucous membrane which had assumed a kind of firm pulpy consistence. Portions of the mucous membrane of the cæcum also presented a similar appearance.

Affections of the appendix are not generally distinguishable from those of the cæcum itself, during the life-time of the patient. We may sometimes suspect them when the seat of the affection is deep in the pelvis, as this organ is frequently found depending in this situation. This was noticed as detailed in Case VI. The soreness was deep-seated in the pelvis, which led to the suspicion that the appendix was the principal seat of the affection. Indeed the opinion was expressed before the post-mortem examination. But the situation of the appendix varies so much in different individuals, that even this sign can lead to nothing more than a mere suspicion; nevertheless, this fact is often very important in its practical results.

In the dissections which I have made, I have not discovered much uniformity either in the size of shape of the appendix, or of its place of origin, nor of the direction which it takes on leaving the cæcum. Among my dried preparations, I have one colon of common size, in which the appendix measures six and a half inches in length, and nearly half an inch in diameter; passing off nearly in a straight line from the most depending point of the caput cæci, the extremity of the appendix resting on the floor of the pelvis. I have another colon of equal size, in which the appendix is less than two inches in length, and no thicker than a crow's quill. This has its origin just at the margin of the ilio-cæcal valve, is coiled upon itself, and firmly bound to the cæcum by a fold of peritonium. In another specimen the appendix measures four inches in length; has its origin within half an inch of the termination of the ileon and makes a turn round this intestine, firmly embracing it. I have preserved nine preparations of the cæcum and appendix, all of which vary materially in their form and construction, so that no general description will answer to any two of them.

Dr. Burne observes, that "The confirmation and situation vary much in different individuals—a fact not noticed by anatomists, but which I have found to influence the phenomena and nature of its diseases very considerably. The conformation of the appendix is generally described as flexuous, and its situation as depending into the pelvis; but by some the situation is not noticed, further than that the appendix arises from the cæcum, and is bound down to it on the right by a fold of peritoneum, the meso-appendix; whereas the appendix is more frequently situated on the outer edge of the *psaos magnus*, on the *fascia iliaca*, snugly curled up beneath the cæcum, and concealed by it—a fact which I have verified by many dissections, and one of great importance to the pathologist, as will be seen.

In the event of a perforative ulceration of the appendix, and a consequent peritonitis or fæcal abscess, the parts involved will differ entirely according to the situation of the appendix. If it should happen to depend into the pelvis, then the pelvic viscera will be implicated; if it should happen to be situated on the iliac fascia, and underneath the cæcum, then the belly of the iliacus internus and the neighboring adipose cellular tissue will be involved, and the course of the abscess be determined accordingly: so important is the relative anatomy of even inconsiderable organs to the physician."

The foregoing cases are selected from eighteen well marked instances of this class of affections which have occurred under my own observation during the last fourteen years. I met with several other examples of this disease during the earlier years of my practice, of which no notes were made at the time. I have also occasionally seen cases in consultation with neighboring physicians, so that abundant evidence is afforded of their frequent occurrence, at least in this section of the country.

They are spoken of by some medical writers as being obscure in their origin, and often difficult of detection. Professor Albers, of the University of Bonn, makes the following remark, "That the diagnosis of the disease of the cæcum is attended with no inconsiderable difficulty appears from the well known circumstance, that very often they have never been suspected to exist during the life of the patient, and have been discovered only on dissection."

Dr. Burne remarks, that "A practitioner who witnesses one of these cases for the first time, is satisfied it is not a common inflammation of the bowels, although he does not know its exact nature—he says the case is a curious one—he cannot make it out."

Dupuytren, in speaking of the importance of a correct diagnosis in these affections, says, "I have seen this inflammation give rise to the belief of the existence of internal strangulation, hepatitis, metritis, and even peritonitis." That these affections are sometimes mistaken for common inflammation of the bowels, or "Bilious Colic," I am fully aware, having been consulted in four well marked cases, the true nature of which had been entirely misapprehended. One of these terminated in the usual way by resolution—the other three were allowed to pass on to suppuration, one of which terminated fatally, the abscess bursting into the peritoneum. The other two cases opened externally, a little above the crural arch, one of which formed ill-conditioned sinuses which remained open more than a year—and finally recovered.

The causes of failure in diagnosis are probably owing in part to the mildness of the earlier symptoms, which attract but little attention from the patient or physician; but principally to the fact, that the pain attending them is generally described by the patient as a colic, and is frequently referred to the umbilical region, or to the abdomen generally. Indeed it is very rare that the patient directs attention to the seat of the disease.

It is only by a careful examination that the nature and seat of the difficulty are detected. By gentle pressure or percussion over the surface of the abdomen, as you approach the right iliac region, the patient shrinks from you, or perhaps instantly seizes your hand, and betrays surprise at the discovery of such exquisite tenderness.

Hence the importance of carefully examining every part of the abdomen, in these, as well as in all other affections of the abdominal viscera.

If we take into consideration the situation of the cæcum, fixed as it is in the parietes of the abdomen, admitting of no considerable variation in its relative position with regard to the other viscera, it must be evident, that with such an examination the disease under consideration would seldom escape early detection.

The progress of the phenomena as developed in these affections, is thus described by M. Dupuytren: "After some error in diet, a constipation or diarrhœa, of longer or shorter duration, more or less habitual colic; sometimes without any of these causes, the patient suffers from violent colic and pain in the bowels, with a tendency to concentration in the right iliac fossa; it may also extend towards the large intestine, or over the whole abdomen. • This colic is generally accompanied by constipation, and sometimes vomiting; such are the symptoms by which we may predict the occurrence of the tumor. They are of very various duration; sometimes lasting for a month or more, sometimes for a few days only."

Dr. Hays, Editor of the American Journal of the Medical Sciences (see Medical Essays, vol. 1, page 81, published by Lea and Blanchard, 1841), says: "the disease usually announces itself by certain *precursory symptoms*, as colic, with alternate constipation and diarrhœa, occurring at longer or shorter intervals, and continuing for a greater or less period. After a while the attacks of colic become more severe, and appear to centre in the right iliac fossa; they may also radiate in the direction of the great intestine, or spread over the whole cavity of the abdomen. These pains are usually attended with obstinate constipation, and sometimes with such violent vomitings as to simulate an internal strangulation. In some cases the disease has its origin, is attended with less violent symptoms, and commences with pain the right iliac fossa. If this region be examined, it will be found more tender to the touch, more resisting, and sometimes to project more than in the natural state. It is frequently possible, by pressing upon the abdominal parietes, to distinguish a circumscribed tumor of variable size, of considerable firmness, more sensible to the touch than any other part of the abdomen, and appearing to rest upon the cæcum; the remainder of the abdomen is soft and indolent. The patient continues at the same time to complain of colic and constipation."

Dr. Burne, in the papers to which we have already alluded, gives the following graphic description of these affections: "In all the examples of inflammation of the cæcum, which I have witnessed, the

development of the symptoms has been in the following order: The first sign is a sense of uneasiness, which soon amounts to an aching pain, deep-seated in the right ilio-inguinal region, arising unexpectedly while the person was in health, and not preceded by rigor or exposure. This pain increases progressively for twelve or twenty-four hours, retains its character, is fixed and constant, never even remitting. Then supervene gradually tenderness, fullness, and tension of the whole ilio-inguinal region; the bowels are constipated and do not reply to medicine, and the patient grows sick and vomits. Some febrile movement now begins to manifest itself; the tongue becomes white and furred; the urine scanty; the appetite is gone; the pulse is frequent, tight, and sharp, with increased volume, but the stroke, though sharp, is not strong, nor is its impression on the finger decided—it is a pulse of irritation and inflammation combined; the patient lies on the back quite still, slightly inclined to the side affected, and the case presents a serious aspect."

The above is certainly a faithful delineation of most of the symptoms which are usually manifested in these cases, but these phenomena are most invariably preceded by a series of "*precursory symptoms*," as noticed by Dr. Hays.

By referring to the cases detailed by Dr. Burne, it appears that no one of them came under his observation earlier than the fifth day after the attack; a circumstance which fully explains the cause of his having failed to notice the *symptoms*, which usually precede what may be considered as signs, peculiar to these affections.

Instead, therefore, of waiting for the development of local signs, these symptoms should at once awaken our suspicions, and if we are led by them to a careful examination of the abdomen, we may, even before the attention of the patient has been directed to the part, discover a circumscribed fullness, well defined, and quite tender to the touch, situated over the cæcum. It is during the prevalence of these earlier symptoms, that a well directed treatment will often prove most successful.

The course of practice which I have found most successful in these cases, previous to the development of inflammatory action, is a free use of calomel and opium, together with warm fomentations to the abdomen. When the system is fully under the influence of opium—pain and spasmodic action having subsided—an enema of castor oil and spirits of turpentine, in a sufficient quantity of warm water to freely distend the colon, will generally succeed in removing the offending matters. By thus removing the cause of the difficulty, we may often avoid the more serious character of these complaints. If, however, this course proves unsuccessful, and inflammatory action supervene, it must promptly but cautiously be met; and here I cannot do better than to commend as worthy of special attention, the following judicious observations of Dr. James Johnson. "As the inflammation is the result of a mechanical source of irritation, or, perhaps, obstruction, it is obvious that depletion must not be carried to so great

an extent as in idiopathic enteritis. Another consideration which should moderate the employment of depletory measures, especially of local or general bloodletting, is the reflection that the patient may have to go through an iliac abscess, and that his powers should be husbanded for its support. The depletion, then, should be cautious; enemata, and such purgatives as the stomach will bear well, should be administered; light poultices and fomentations are to be applied; and about the fifth or sixth day the bowels may begin to act, and the symptoms to subside. Should they not subside, the physician or surgeon must anxiously watch for the first appearance of an emphysematous tumour, and make an early incision into it; foetid gas escapes, and the cellular tissue is more or less sloughy, or actually sloughing. The patient must now, of course, be supported, and even stimulated, to the necessary pitch."

There seems to be some difference of opinion among practitioners, as to the propriety of opening these abscesses after suppuration has taken place. M. M. Dupuytren and Dance recommend leaving them to the efforts of nature, allowing the matter either to make its own way to the surface, or to escape through some of the natural passages; while on the other hand, Drs. Hargrave and Kennedy, of Dublin; Drs. Johnson and Copland, of London; and Dr. Hays, of Philadelphia, advise a free opening for the exit of purulent matter, as soon as a tendency to the surface is evident. There can be no doubt that the latter course will be sustained, when experience shall have decided their relative advantages.

We occasionally, in these cases, meet with an exceedingly irritable condition of the rectum. Under these circumstances, an enema, by a common syringe, will not be retained in sufficient quantity to be of much advantage. We may then resort to the use of an elastic tube, passed high up into the colon, as recommended by Dr. O'Beirn.

I have during the last two years made use of the tube described in connection with Case IV., which I have found in some respects preferable to the common elastic tube. Its advantages consist in its being of sufficient firmness to retain whatever shape or course we may choose to give it, previous to its introduction, while the bulb at its extremity is not liable to be obstructed in its passage by the loose folds of the mucous membrane; we consequently avoid all danger of breaking the tube, or of injuring the coats of the intestine.

In detailing the foregoing cases, I have appended occasional remarks; not, however, for the purpose of offering to the profession any thing new, but rather with the intention of directing the attention of the readers of your Journal to a class of affections which are scarcely noticed in the systematic works which constitute the libraries of most country practitioners; and also of inviting their attention to the articles from which I have drawn so largely in preparing this paper.—*New-York Journal of Medicine*, July, 1845.

Remarks on the Climate, Diseases, &c., of Middle Florida—particularly of Gadsden county. By ROBERT EDMONDS LITTLE, M. D., of Quincy. (*From Am. Jour. Med. Sciences, July, 1845.*)

Gadsden, one of the most northern counties of Middle Florida, extends from the Georgia line on the north, to the Gulf of Mexico on the south, a distance not far short of one hundred miles,—while its eastern and western boundaries are the Apalachicola and Ockolonee rivers.

The northern portion of the country (the part most densely populated) is watered by numerous streams of considerable magnitude, the principal of which, beside the above named, are Little river, Witalacoochee, Tellogee and Rook Comfort creeks. Their banks are low and often so boggy as to cause it to be necessary for the road over them for the distance of several hundred yards to be elevated, so as to render the stream approachable. These waters are clear and usually not unpleasant to the taste. The face of the country is for the most part rolling—especially the rich portions of it in the neighborhood of the hammocks,* while the pine lands are tolerably level; the former fertile, producing in abundance all the great staples of the climate,—the latter are poor and little adapted to cultivation; unless manured, being principally used as ranges for cattle, of which many of the planters possess an immense number. The hammocks are covered with a growth of cane, oaks, hickories, poplars, sweet gums, red bays, magnolias, &c., and vary in width from fifty yards to a mile—the soil of which they are composed is a black loam, based upon a bed of clay. In passing over the country the traveller frequently meets with barrens, dotted here and there with stunted oaks, pines and prickly pears, which, however, are soon forgotten in beholding beautiful plains, shaded by stately pines; now and then green mounds, the receptacles of the dead—and not unfrequently a glassy pond, whose sparkling waters are so many mirrors reflecting the beautiful verdure of the live oaks which dip their wide-spreading branches far over its banks. In the early settlement of the country when land was easily obtained, no care was taken to prevent a deterioration in fertility—hence many fields are now lying in a waste condition, not worth cultivating, which will, however, in the course of a few years be entirely renovated and capable of producing as well as formerly,—no land in the world being more susceptible of improvement by rest.

* The word hammock is applied indefinitely in many parts of the territory; in one quarter it is used to signify "a thickly wooded place;" in another "a mound raised out of a swampy tract of land;" and again it is supposed to be a corruption of Tomaka, the Indian name for a river whose banks are covered with hammocks or swamps. Webster derives it from the Spanish word hamucu, referring to the beds used by sailors, and as the soil of which these hammocks are composed seems to be raised above the surrounding water.

The great staple of Middle Florida is cotton—but since its depreciation in value, many of the planters are turning their attention to the cultivation of tobacco, a species of which is produced in many portions of the district, almost equal to that of Cuba. Rice and sugar cane grow well and are cultivated in quantities sufficient for domestic use;—the latter might be made an article of considerable revenue, as the soil and climate seem to be peculiarly adapted to its cultivation. The fig and orange arrive at perfection, and with care might be rendered a source not only of luxury, but profit. From the slips they bear fruit in a very few years, and the only attention necessary to bestow on them, is protection from the frosts of winter until they are matured. The apple, pear, cherry, grape, gooseberry and currant are unsuited to the climate, seldom arriving at perfection—while the peach and melon flourish, affording during the summer an abundance of agreeable fruit. The long continuance of warm weather prevents a proper attention being paid to gardening, yet so mild are our winter and spring months, that almost every article usually found in gardens in more temperate climes is capable of being produced in profusion. The Irish potatoe, onion, and cabbage, degenerate after the first year's cultivation—their produce being small and of unnatural flavour, while the sweet potatoe furnishes a considerable portion of the population with an agreeable article of food, the soil being very favourable to its production.

The flora of Middle Florida is peculiarly rich in the variety and beauty of species, the surface presenting one vast bed of flowers. And no portion of the American Continent is so plentifully supplied with insects and reptiles as in this "land of flowers." In rambling through the woods scarcely a leaf can be turned, or brush disturbed without breaking in upon the slumbers of some "creeping thing," whilst at night, during the summer season, our ears are assailed by the buzzing of myriads of mosquitoes in their *murderous* attacks upon those of us who are so unfortunate as not to have provided bars as a means of defence. So formidable are their stings, that cattle and deer are often compelled to leave the swamps, and take up their residence in the pine woods to avoid them.

In all parts of Florida is to be found a species of land tortoise, called the Gopher (*Gouffre*, French), (*Testudo Polyphemus*). Alligators of large size are numerous, and on the banks of the Apalachicola, on a bright day, hundreds of these monsters are to be seen basking in the rays of the sun, ready to pounce on any prey that may be so unlucky as to be accidentally thrown in their way or so hardy as to approach them.

Of the feathered tribe we have a great variety—especially aquatic—the most prominent of which is the large wood pelican; an awkward bird in its movements on land, but when placed upon its congenial element, graceful. Large droves of the paroquet are seen, a noisy but beautiful bird, singularly graceful and rapid in flight.

As objects of greater interest to the sportsman, various quadrupeds

are found in a wild state. Luxuriant in vegetation, the Territory affords ample opportunity for the hunter to indulge in the exciting chase after deer, and for the hardy woodman to hunt bears. Wolves and panthers are numerous, frequently proving troublesome to the settlers.

Of the climate of our American Italy much has been said, and situated as Florida is, in the southernmost part of our great confederacy, for years past it has been looked to with the hope of its possessing a climate capable of affording relief to those afflicted with diseased lungs, scores of whom annually leave their northern homes but to languish and die on a foreign shore. Whether this hope is likely to be realized or not, time alone can certainly determine.

Warm weather usually makes its appearance about the middle of April, and continues with but little variation until the last of September; when the mornings and evenings begin to grow pleasantly cool—although the weather remains at mid day warm until November is ushered in. During the last two months of the year, the days are pleasant; but few blasts of cold weather sweeping across the land to remind us of overcoats or cause us to desire to exchange our pine knot for the anthracite fires of our northern friends. Although hot weather is of long continuance, the thermometer seldom indicates a temperature higher than 95° , the mean heat of January being 55° , of July and August 87° ; and of November and December 58° . At this point (Quincy inlet, 30° $40'$), a breeze from the Gulf of Mexico is generally felt about ten in the morning—which continues until late in the evening, thus mitigating considerably the heat of summer and rendering our almost tropical clime not only endurable, but pleasant at a time when the inhabitants of a more northern region are sighing for the zephyr's breath to stir the dormant, sultry atmosphere with which they are surrounded. Our nights in summer are cool, especially towards the latter part,—so cool, indeed, as not unfrequently to make it necessary to add a blanket to the usual articles of clothing. In summer, droughts of long duration are not uncommon—much to the injury of the planting community. The spring months are those most usually productive of rain, which falls not gently for a few hours, but in torrents, and for whole days with such impetuosity as to have gained the distinctive name of "Florida rains." As the banks of the water courses are low they are easily overflowed; the rush of waters sweeping every thing before them, fences, bridges, &c. nothing being safe from their desolating influence. Such was the case in the spring of last year. For three days the rain fell in such torrents as to darken the atmosphere, rendering it almost impossible for a man to be recognized at the distance of twenty steps. The streams were carried far beyond their banks; lagunes overflowed; roads rendered invisible; in short, the appearance of the whole country was changed. Traveling was suspended for weeks; as well as intercourse between neighbours; all waiting for a subsidence of the waters and rebuilding of bridges, many of which were swept away—all injured. Rains are usually succeeded by pleasant weather, the surface of the

country drying in the course of a few hours, the soil being very absorbent.

The summer winds generally come from the south and west, and when these are accompanied by clouds, rain is pretty sure to follow; while northern winds seldom precede or attend rain. From our proximity to the Gulf of Mexico, tornadoes are not unusual. The one which occurred in the fall of eighteen hundred and forty-three will be long remembered, because of its violence and the destruction of property caused by it. Port Leon, St. Marks, and most of the settlements on the Wakulla were destroyed. The gale commenced in a gentle breeze, causing but a slight agitation of the waters and rustling the leaves; gradually it increased, the waves began to lash the banks, and the trees to bend; and after a time to be prostrated, unable to withstand the fury of the enraged elements. Time only served to add strength to the winds, and they ceased only when every thing had fallen before them. Gales such as that alluded to seldom occur in this region, although almost every spring and fall are attended by storms of considerable violence.

Our coldest months are December and January. The past was the most severe winter experienced in Middle Florida for the last twenty years; in several instances the small pools of standing water caused by the hoofs of horses, were frozen over and remained so until 9 o'clock in the morning. Snow has fallen but twice in the last eighteen years, and then only in quantities sufficient to give the ground here and there a white appearance. Atmospheric changes are frequent, the mercury falling and rising again 15° to 25° within a few hours; but fortunately the cold *spells* last but a few days at a time and are succeeded by weather most delightful to the invalid; although the changes are sudden, there are but few days in winter so unpleasant as to prevent the valetudinarian from taking necessary exercise in the open air either on foot or horseback. As before remarked, an opportunity is seldom wanting in winter to indulge in the chase after deer, or less fatiguing sport of hunting wild turkeys.

In the villages, the accommodations for the sick are good—the hotel tables being bountifully supplied with all the delicacies of the season, a circumstance heretofore much complained of, to say nothing of the exorbitant charges of the worthy Bonifaces of our land.

Separate and apart from the evidence of meteorological registers, we are strongly inclined to the opinion that the climate of Middle Florida presents inducements as a winter residence to those who are predisposed to, or have already contracted tuberculous affections in a northern latitude (provided they are not far advanced), equal to any portion of the eastern division of the territory; taking into consideration the influence of good society—accommodations, &c. Towards the permanent restoration of advanced cases nothing can be done; such we would advise to remain at home and not to seek a grave in a strange land.

A common opinion prevails at the north, not only among the un-

informed, but even among physicians, that consumption is a disease that rarely originates in warm climates, an opinion not more common than erroneous. In the southern country tuberculous diseases are often met with, not the result of colds—but of the long continuance of warm weather and the use of food almost entirely vegetable, circumstances tending to produce a debilitated state of the system. This cause is not liable to operate with the same force upon natives of a northern as upon those of a southern region, the former, reared in a climate whose tendency is to invigorate the frame and render it capable of enduring for a number of years the debilitating influence of warmth, resist phthisis for a great length of time, while the latter, subjected from infancy to a high temperature, early fall victims to tuberculous cachexy upon the occurrence of even the slightest agent in its production.

The prevailing diseases of this portion of the southern country are those which are supposed to have a relationship or connection with that peculiar agent termed malaria, and our territory is rich in all the elements favourable to the elimination of this poison, viz: vegetable matter in a state of decomposition; high temperature and moisture; a union of all these being necessary, or either alone being capable of generating it, while a superabundance of the latter, moisture, although the other constituents are in exact proportion, prevents its formation. No fact is better known in the southern country, than that for the first few years after the settlement of a particular district, its inhabitants are more exposed to disease than in after years, because of the evolution of miasm in large quantities, caused by the felling of the forest and cultivation of the soil; a greater amount of the earth's surface being exposed to the action of the sun's rays, but in subsequent years when it has been deprived of its superabundant vegetable matter and well drained, its inhabitants are exempted in a great measure from malarious diseases. The pine lands which are dry and removed from the water courses, are always considered healthy; one of the malarial elements, moisture being absent; a fact also strikingly illustrated in the epidemics which annually devastate Egypt, caused by the overflowing of the Nile,—the disease never extending into the arid plains of the desert. An excess of moisture tends to the destruction of any poison which may have been in existence prior to its creation, for instance flat places in ordinary seasons unhealthy, become healthy if completely overflowed, while, on the contrary, high lands where sickness was never known to prevail before, emit a miasm which sweeps every thing before it. The advice of Lancisi to those travelling near the Pontine marshes, not to do so after dusk or early in the morning, as the dew in their neighbourhood is largely adulterated with miasm in a concentrated state, might well be given to travelers in Florida, where the dews are remarkably heavy, and, from the great susceptibility of the system in warm climates to the impression of morbid agents, capable of doing much injury at that time.

Dirt Eating.—Apart from the sickening influence of malaria, we cannot refrain from noticing the degeneration, mental and physical, of children reared in this extreme southern portion of the Union. During our first months' residence in Florida, in passing through the country, we often stopped boys on the road, not over ten or twelve years of age, who presented the most abject state of degeneration imaginable; with head and body large, limbs shrivelled and deformed, eyes dull and of a bilious tinge, lips colourless, and features distorted. This degeneration, by many, has been attributed to dirt-eating, a propensity very general throughout the whole country.

Having completed a general and consequently incomplete description of the physical phenomena of a portion of the Territory, reference will now be made to its diseases. If the remark made by Dr. Macculloch be true, that the disorders produced by malaria include more than half the number, prevailing at any moment throughout the universe, it may readily be inferred from what has been said above, that a majority of our diseases are *malarial*.

Intermittent Fever.—There is no disease with which physicians are supposed to be better acquainted than intermittent fever—but on the other hand it must at the same time be confessed, there are few which occur under so many different circumstances—modified by so many causes, both malarial and geological, and so difficult to be recognized in its anomalous forms. But few cases of an inflammatory character are met with—they are usually adynamic and complicated with visceral obstructions, and if suffered to go on, degenerate into remittent or congestive fever, or assume the appearance of slight apoplectic or epileptic attacks; palpitation of the heart, toothache, "sun pain," &c.—diseases Dr. Macculloch would have us believe identical with intermittent fevers, because of their liability to slight remissions—their alternating not unfrequently with it, and their being cured by the same remedies. Enlargement of the spleen and night sweats are the most troublesome sequelæ of intermittent fever. When the disease becomes chronic, the intellect is impaired—which, together with the physical degeneration, renders life a burden. Relapses are frequent, and each succeeding attack increases the susceptibility of the patient to another.

Remittent Fever.—Intimately related to intermittent fever, and produced by the same cause is bilious remittent fever, the prevailing febrile disease of our summer months. So much do the two diseases resemble each other, as to be considered by many as identical, or at any rate modifications of the same disease, an opinion not destitute of foundation, as their symptoms during life, and morbid appearance after death, differ only in degree.

The disease is usually ushered in by a chill, sometimes severe, frequently nothing more than a cold sensation, (which occurs as a general rule every twenty-four or forty-eight hours) followed by pain in the back and limbs. The tongue in the early stages of remittent fever is moist, and presents a white or yellow appearance, but as the

disease advances, it becomes dry and the colour changes to a dark brown. Pain in the head is a common symptom, frequently continuing through the whole progress of the case. During the stage of excitement, the pulse is increased both in force and frequency, while, during the remission, it is scarcely above the natural standard, frequently below it. The bowels are commonly torpid, requiring the most active cathartics to excite them. After the disease has continued for four or five days, epigastric tenderness is not uncommon, attended by weight or tension, requiring for its relief the abstraction of blood locally, blisters, &c.

The condition of the skin varies during the stage of excitement; its temperature is much increased, while it is not unfrequently lessened during the remission. In grave cases its colour is inclined to be yellow; in slight and even in tolerably severe cases, its appearance is not materially changed.

The intelligence of the patient being influenced by the violence of the headache, it may be readily inferred that in the beginning of both *recovered* and *fatal* cases where there is much pain in the head, delirium is not an uncommon symptom during the exacerbation. In fatal cases, towards their termination, there is generally low muttering delirium or coma.

Remittent fever in this climate, as a general rule, terminates in from three to ten days.

Congestive Fever.—Of all the diseases incident to a southern climate, no one, perhaps, is so much dreaded by the profession, as congestive fever, a disease which, unless arrested in the onset, is generally attended by the worst consequences. Its attack is preceded by precursory symptoms, sudden and violent, and, unless the most prompt measures are early used, it runs its course in from twenty-four to seventy-two hours. For several days prior to an attack, the subject of it complains of general malaise with derangement of the chylopoietic viscera; finally a chill supervenes which ushers in the disease in all its violence. The pulse is now exceedingly feeble; breathing quick and laborious; the tongue moist; bowels usually costive; they are, however, sometimes fully acted upon, and not unfrequently there is nausea and vomiting. The patient complains of *internal heat* and of a heavy load pressing on the epigastric; his calls for water and efforts to throw off the load pressing him are frequent. As the disease progresses the extremities become very cold and shrivelled; pulse almost imperceptible; intellect clouded; spittle spontaneously flows from the mouth; subsultus supervenes; the skin grows colder, is covered with a cold clammy perspiration, and loses its natural colour, particularly that of the face, and finally it is not uncommon for the case to terminate in convulsions, especially if there be congestion of the spinal cord. Such are the symptoms most usually observed. We have not attempted a full description of them, as they are modified by a variety of circumstances—such as seat of congestion, &c.

During the summer and fall seasons, cholera infantum, diarrhoea and dysentery are very prevalent, as might be inferred from the temperature of the weather and locality of the country, being produced by nearly the same causes that give rise to intermittent and bilious fevers. To a variety of other causes have they been attributed, as, for instance—to eating fruit, to heat, &c. Facts, however, seem not to favour the supposition. That fruits in moderation are prejudicial to health or productive of disease, we cannot believe, as, during seasons of great scarcity these diseases are not uncommon, while it is not ascertained that they occur more frequently during seasons of plenty than at any other time. A rigid proscription of them will not prevent an attack of cholera infantum or diarrhoea, nor will a free use of them bring on disease without the influence of other agents, as is witnessed in families where no restraint is imposed on the children in eating apples, melons, currants, and other fruits, even before they are matured. That heat alone is incapable of giving rise to the above diseases we are assured from the circumstance of this not being most prevalent during the warmest summers. Hence, we must conclude that other causes than warm weather and the use of fruits are necessary to their production. From the prevalence of febrile diseases and of bowel complaints and disappearance at about the same time, it is altogether probable that they are engendered by one common cause.

Diarrhoea and dysentery are not usually found uncomplicated with other disease. They are, for the most part, sequelæ of obstinate or badly treated cases of fever, and require for their removal a long course of treatment.

In the tropical climate of the Southern States the liver is most generally the suffering organ in disease, as the respiratory apparatus is at the north; as a consequence, the affections to which it is prone are numerous—often slow in their attack and progress, and liable to be misunderstood from their obscurity. The organization of the liver, its immense size in comparison with the other abdominal organs, and the important office that it is called on to perform, force the belief upon us that any derangement either in structure or function must be attended with consequences which will sooner or later, if not relieved undermine the health, cause the patient to drag out a miserable existence, and finally end his career, a victim to delay and inefficient or misapplied medical treatment.

As acute hepatitis is uncommon in this climate, except as a result of the chronic form, a consideration of it will not be had, our object being to speak more particularly of the latter, as it is a disease daily encountered by the southern practitioner. In saying that acute hepatitis seldom occurs except as a sequel of the chronic form, we wish it to be understood that the disease is scarcely ever a primary affection itself, and that it usually supervenes upon or is rather an aggravation of the last named variety. For years patients will labour under a variety of symptoms, without being able to determine or even

suspect their cause, when suddenly they are aggravated, or a new one in the catalogue appears, and its true nature revealed. Such is its insidious Protean character.

Middle Florida has been visited by scarlatina very rarely. Sporadic cases are occasionally seen, mild, however, in character. About the first of January last, it made its appearance in the village of Quincy, extending its ravages to some two or three plantations in its immediate vicinity. It was confined to a few families, several members in each being attacked, varying in age from one to ten years. The two first cases that happened were marked by a peculiar malignancy and terminated, we believe, within thirty-six or forty-eight hours from the commencement of the attack. They were for a time supposed not to be cases of scarlet fever, but subsequent cases, similar in many respects, revealed to the attending physician the true nature of the disease, which, in the course of the epidemic, assumed all appearances, from the mildest to the most malignant. The patients were, as a general rule attacked suddenly, either with pain in the head or vomiting. No two cases presented exactly the same appearance. In all severe cases the heat of skin was great from the commencement, to the termination of the disease. The pulse was frequent in some cases, whilst in others it was slow, respiration difficult, and the thirst tormenting. In a majority of cases, there was no affection of the throat complained of, while in others there was soreness of the fauces and neighbouring parts for a month after the fever had subsided. In two or three instances the glands of the throat swelled and suppurated, giving rise to troublesome sores. The absence of, and the singularity of the eruption when present, gave rise to a doubt among some, whether the disease was scarlatina or not. Its absence was no just ground for doubt, as it often appears without the eruption being present, constituting the *scarlatina sine eruptione* of some writers, and the *scarlatina sine exanthemata* of others. The eruption, when it manifested itself, appeared simultaneously with the other symptoms, and presented a variety of appearances—in some, it was papular, and in others miliary. The eruption coalesced in a very short time, became pretty uniform over the whole body, and faded or assumed a livid appearance in the fatal cases prior to death. Vomiting and purging in the commencement of the disease were always grave symptoms, and, if we remember correctly, both of the fatal cases which we witnessed had liquid operations for a few hours before their termination. The determination to the brain in many cases was excessive; when this happened, unless a decisive plan of treatment was resorted to, convulsions would ensue, and the patient die comatose. This was the case with a fine little boy of this place, a son of Judge Allison. In the morning he was restless, and seemed to have contracted a slight cold; no attention was paid to him, save the administration of a mild aperient; towards evening, while resting on his nurse's knee, convulsions came on, and, notwithstanding an active course of treatment, he died comatose on the

third day of his illness. Two or three cases were reduced very low by the supervention of enteric symptoms, which were difficult to relieve.

As before remarked, the disease was confined to a few families, and these were either in the same quarter of the village or related to each other, and in the habit of constant association. Its increase was gradual. When it commenced it usually attacked all the younger members of a family in succession. Several had the disease who held no communication with the sick or convalescent, while many escaped who were often in the sick room. As to its contagiousness or non contagiousness we are not prepared to offer an opinion.

Nearly all the recovered cases were afflicted with some one of the sequelæ of scarlet fever. The lips, mouth and cheeks in several were ulcerated, whilst others had partial or general dropsy, which was relieved by cathartics succeeded by tonics. Slight exposure to cold, or irregularity in diet, would bring on a relapse with its attendant consequences.

Belladonna as a prophylactic, was extensively used, but so far as we know, without any good results, as a number to whom the belladonna was administered had the disease in all its violence. From the trial made, we are inclined to adopt the opinions of Pereira, who says that whilst the facts brought forward in favour of the existence of this prophylactic power are only negative, those which can be adduced against it are positive, for twenty cases of failure are more conclusive against it than one thousand of non occurrence are in favour of it.

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The Principles and Practice of Dental Surgery. By CHAPIN A. HARRIS, M. D., D. D. S., Professor of Practical Dentistry, in the Baltimore College of Dental Surgery; Fellow of the American Society of Dental Surgeons; Member of the Medico-Chirurgical Faculty of Maryland, etc., etc. Second edition; revised, modified and greatly enlarged. Illustrated by sixty-nine wood engravings. Philadelphia: Lindsay & Blakiston, 1845. 1 vol. 8 vo., 600 pp.

We have been much pleased in looking over (though cursorily) the above work. We feel warranted in saying that it embodies more practical information and less faults than any other work in the English language, consequently would recommend its perusal in the most unqualified terms to the Medical profession generally and to the scientific surgeon-dentist in particular. It is divided into six parts—viz.

1st. Anatomy and Physiology of the Mouth.

2nd. Physical characteristics of the Teeth, Gums, Salivary Calculus, &c.

3rd. Diseases of the Teeth.

4th. Salivary Calculus—Diseases of the Gums, &c.

5th. Diseases of the Maxillary Sinus.

6th. Mechanical Dentistry.

B. D.

PART III.—MONTHLY PERISCOPE.

Secretion and Properties of Bile.—"A series of experiments by SCHWANN has led to the distinct conclusion of the bile being indispensable to life. They consisted in removing a portion of the common bile-duct, and establishing an external fistulous opening into the gall-bladder, so that the bile might be naturally secreted, but be discharged externally, and not permitted to enter the intestine. Their general result was, that of eighteen dogs thus operated on, ten died of the immediate consequences of the operation, (by peritonitis and other affections, aggravated, probably, by the want of bile;) and of the remaining eight, two recovered, and six died. In the six which died, death was the result of nothing but the removal of the bile; after the third day, they daily lost weight, and had all the signs of inanition—e. g., emaciation, muscular debility, uncertain gait, falling of the hair. They lived from seven to sixty-four days after the operation; and the inanition was the greater the longer they survived. Young dogs appeared to die rather sooner than old ones. Licking the bile as it flowed from the fistula, and swallowing it, had no influence on the consequences of the operation. In the two dogs that recovered, the importance of the bile was equally well shewn; for in these it was found, when they were killed, that the passage for the bile into the intestine had been restored, and the period of its restoration was distinctly marked by their weight (which had previously been regularly decreasing) being augmented, and continuing to increase till it amounted to what it was before the operation; and also by the fistulous opening into the gall-bladder healing, and the discharge of bile ceasing."—*British and Foreign Review.*

Cyanosis of Infants.—*Gazette Médicale de Paris.* Dr. Meigs, Professor of Midwifery in the Jefferson Medical College, read before the Academy of Sciences at its session June 16th, a note upon this subject. Infants die in this case, said Dr. Meigs, from the presence of a black, venous, non-oxygenated blood in the encephalon; it is in the arteries and capillaries of the brain that this blood becomes dea-

tructive to life, acting not as a poison, but simply because of its incapacity to excite the innervation in this organ. The whole world knows the anatomical cause of these phenomena—it is the persistence of the foramen ovale.

The occlusion of this foramen being prevented because the sanguine torrent coming from the vena cava inferior raises and keeps raised, the inter-auricular valve which is thin and floating—Dr. Meigs conceived the idea of placing infants labouring under Cyanosis upon the right side, with the head and trunk slightly elevated, in order that the inter-auricular septum might become horizontal, and that the blood contained in the left auricle might press with all its weight upon the valve which would thus be closed. Dr. Meigs has seen that at the very instant when infants were placed in this position the blue coloration would disappear, proving that there no longer penetrated into the arteries any thing but oxygenated blood. Dr. Meigs affirmed that he had rescued from death from fifty to sixty infants in an hundred by this method, while all the other means employed to the present day, as is well known, have been unsuccessful.

On the employment of Tartar Emetic in large and gradually increased doses in Hydarthrosis. By M. GIMELLE.—*Gazette Médicale de Paris.* The author has already published a memoir upon the same subject, but the present work contains new facts entirely confirmatory of the preceding ones. M. Gimelle has found the medication which he proposes to be efficacious in all cases of hydarthrosis, of however old a date, provided that the synovial membrane had experienced no organic alteration, and that the fluid secreted by it retained its normal character. In these twenty new cases the absorption of the fluid was always accomplished in eight or ten days; the dose of tartar emetic was never carried beyond 80 centigrammes, (16 grains,) commencing with 20 and increasing 10 each day, when the toleration was established. The age of the subjects varied from 27 years to 63.

As a model for the application of the method in all its details, we think it proper to give one of these cases.

M. R., a Belgian magistrate, aged 34, had been affected with hydarthrosis of the right knee for three years. The treatment by leeches, blisters, caustics, by every kind of external irritation, by internal remedies, by the use of natural mineral waters, by baths and compression had failed, in Belgium, in Prussia, and in a private

hospital in Paris, where the patient had sojourned for six months. Such was his condition when he came to consult M. Gimelle. The volume of the right knee was 4 centimetre (near 2 inches) greater than that of the opposite side, the patella was strongly pushed forwards, and on each side of that bone existed a protuberance in which fluctuation was perceived—the flexion of the limb was much restricted—the whole extremity was considerably emaciated, and the patient could walk only with the assistance of crutches.

M. Gimelle commenced the 10th May, 1842, by prescribing tartar emetic in the dose of 20 centigrammes (4 grains) in a potion of 100 grammes, (4 $\bar{3}$.) with the addition of 30 grammes ($\frac{3}{4}$) of the syrup of poppies. Ten vomitions and six alvine evacuations followed. The same dose was administered the next day and produced only two vomitions.

On the 12th, the same dose produced only one alvine evacuation, but there supervened a very abundant perspiration which continued during the entire night. On the following day the synovial membrane was less tense.

From the 13th, the dose of tartar emetic was increased each day from 10 centigrammes (2 grains) to 20 (4 grains) until it reached 8 decigrammes, (16 grains.)

At this date the diseased knee presented a volume only 2 centimetre (1 inch) greater than the sound one, and the fluctuation was scarcely perceptible. From this period the emetic potion was continued in the same dose every other day, until the 31st May, when the volume of the right knee was only one centimetre greater than that of the left one; no fluctuation could be perceived; flexion could be carried to the extent of a right angle; the patient made use of only one crutch. All treatment was arrested, and in the latter part of June the patient left Paris.

During the entire treatment M. R. ate and drank to the satisfaction of his appetite, and in a letter written in 1843, he informed M. Gimelle that he had continued to improve—that the diseased limb had regained its usual volume—that he still had some lameness, but that he could endure standing or walking for several hours.

On the treatment of Acute Articular Rheumatism by Sulphate of Quinine in moderate doses. By M. LEGROUX.—*Gazette Médicale*, June 21st, 1845.—M. Legroux having followed for some time the clinique of M. Bouillaud has come to the conclusion that if the me-

thod of bleeding at short intervals, as practised by the latter physician, often arrests rheumatism at once, it nevertheless has the inconvenience of protracting convalescence, of increasing and of multiplying internal congestions. Having tried the sulphate of quinine according to the formula of M. Briquet, he has met with some serious accidents; but regarding the sulphate of quinine as a powerful sedative, he persisted in the employment of it, greatly reducing the dose, however, according to the following formula: Sulphate of quinine 1 gramme, (20 grains,) or 150 centigrammes (30 grains) for the first day, according to the strength of the patient and the intensity of the rheumatic diathesis. This quantity is divided into six or eight portions, one of which is administered every two hours. Immediately after each dose, half a tumbler of sulphuric lemonade is given to facilitate the solution of the medicine in the stomach. On the next day and the following days, according to the effects produced, the dose is maintained or increased without passing, however, beyond 2 grammes (40 grains) in 24 hours. When the pain and fever disappear the dose is gradually reduced. This treatment has been generally followed to the exclusion of every other mode; in some cases, however, bleeding, purgatives, and blisters have been employed to combat complications which the sulphate of quinine could not reach.

By this treatment, rheumatism was cured generally with as much rapidity as by the employment of sulphate of quinine in large doses, or by the other medications so much vaunted in modern times. In the majority of cases the duration of the disease was from ten to eleven days, when the patients entered the hospital about the second or third day of the affection. As to the influence of the quinine medication upon the blood, it results from the experiments of M. Legroux that the fibrine already superabundant in rheumatic patients is still farther augmented for forty-eight hours after the first dose of the quinine, but that in ninety-six hours it is diminished by one-third, and tends to become normal in quantity. On the other hand, if the analysis be correct, the globules would follow an opposite proportion, that is to say, that their relative proportion would tend to decrease. These results may explain why in larger doses the sulphate of quinine often induces a kind of typhoid state. This point is worthy of attention.

Employment of the Iodide of Potassium in the treatment of the primary symptoms of Syphilis.—*Bulletin Général de Thérapeutique.*
At the present day no one denies seriously the efficacy of the iodide

of potassium in the tertiary symptoms of syphilis. This is one of the few articles whose reputation has been as rapid as it was just. It was but natural that the brilliant success obtained from its use in consecutive syphilis should produce a disposition to make trial of it in the primary symptoms. Such trials have been made, but with different results. While some have obtained only a very doubtful success, others vaunt its efficacy in every period of syphilis, even in its incipency. We have before us a treatise by Dr. Mistler, in which he adopts the latter opinion, and from considerations which seem to us to be new and worthy of interest.

According to this author, every local and primary chancre, however small and mild it may be, when once developed, manifests itself almost always after the lapse of a certain time, by the development of consecutive symptoms, such as buboes, ulcerations of the throat, &c., although you may have employed all your efforts to prevent the absorption of the virus. The same thing does not take place when the iodide of potassium is employed from the beginning of the affection and conjointly with local treatment. In these cases, says M. Mistler, the consecutive infection is as rare as it is common after the ordinary mode of treatment; and nevertheless, adds he, the iodine treatment produces no very sensible effect, either for good or for evil, upon the local symptoms, but it opposes the development of the consecutive, preserving the economy from virulent infection. The rapidity of its absorption, far from rendering its action uncertain, as has been supposed, constitutes on the contrary the preservative power, which resides particularly in this property, of stimulating actively the lymphatic system, and thus counterbalancing the action of the syphilitic virus.

All this is perhaps rather theoretical, but the author affirms—and this is the important thing for practitioners—that when the iodide of potassium is administered in sufficient quantity in primary syphilis, it prevents infection and opposes the development of consecutive symptoms.

When a patient with chancre applies to M. Mistler, he endeavors to destroy it, to dry up the local affection, or treats it with the means generally used; but at the same time, in order to preserve the patient against the consecutive infection, he administers from 25 centigrammes (5 grains) to 1 gramme (20 grains) of the iodide of potassium every twenty-four hours. It is but seldom necessary to go beyond 1 gramme per day. This dose is sufficient in the majority

of cases. He continues the use of this remedy not only until the local symptoms have completely disappeared, but for some time afterwards, until it appears to him that the secondary affection is no longer to be apprehended.

This treatment, he says, has over others incontestible advantages. It does not weaken the constitution like antiphlogistics—does not act upon the mouth and salivary glands like mercury, and finally does not require the patient to protect himself particularly against taking cold, as is necessary after the employment of sudorifics. It imposes no restraint upon the diet or regimen of the patient.

Thirty-eight patients affected with chancre have been treated by M. Mistler according to this plan—thirty-two have been preserved from the secondary affection, and in the other six consecutive symptoms made their appearance, five of these were cured by mercurials combined with iodine preparations, and only one resisted every mode of treatment. He died in consequence of ulcerations of the larynx.

Anti-Syphilitic remedies and their therapeutic application. Prize Essay, by M. PAYAN.—*Gazette Médicale*. In this work, which obtained the prize from the Medical Society of Bordeaux, M. Payan, Chief Surgeon of the Hospital of Aix, expresses opinions nearly in conformity with those of M. Ricord. His therapeutical experiments have led him to believe that the old division of syphilitic symptoms into primitive and consecutive is insufficient, and to admit with M. Ricord in the manifestation of these symptoms three successive phases or periods. In the first, he ranges the symptoms called primitive, without, however, considering them, with the Parisian Surgeons, as the simple effects of a local disease: such are blennorrhagia, chancre, bubo, or adenites. The second period comprises symptoms which denote evidently a general infection, and affect principally the skin, the mucous membranes, the eyes, the testicles: such are the different syphilides, fissures, alopecia, chronic furuncles which terminate in ulceration, cutaneous nodosities or tubercles, consecutive ulcers or chancres, and different excrescences in the vicinity of the sexual parts. In the third period he ranges the symptoms which denote an infection of an older date, and which are more deeply situated: such as deep seated tubercles of the skin and mucous membranes, tubercles of the cellular tissue, commonly called gummy tumours, periostitis or nodes, caries, necrosis, &c.

Each of these periods gives rise to peculiar therapeutic indica-

tions, and has a specific remedy which is not equally applicable to the other two periods. Thus he regards mercury as the specific of the first period, the iodide of mercury as the specific of the second, and the iodide of potassium as the specific of the third.

M. Payan remarks that mercurial fumigations and baths are inconvenient, inasmuch as we are unable to appreciate the quantity of mercury absorbed; he employs fumigations only in certain local affections, as venereal testicle and certain excrescences; he reserves mercurial frictions for those cases in which a phlegmasia of the digestive tube opposes the internal use of mercury; with M. Ricord, he esteems the proto-iodide of Mercury as much less irritating than the deuto-iodide, and he recommends the cyanide of mercury as an excellent preparation for delicate and susceptible persons.

He regards the action of the iodide of potassium as *heroic* in the third period of syphilis, and that its efficacy is proportionately greater in old cases, an opinion generally entertained by modern writers upon this subject.

The Diagnosis of Hepatitis and Hepatalgia.—The following summary, though it has nothing novel to recommend it, may be advantageously borne in mind:—

“Although the pains accompanying hepatalgia, may be as intense as those of hepatitis, and in many instances, perhaps more urgent, they are not constant, but are at the outset, and frequently, also, during the whole progress of the disorder, paroxysmal, affording in the interval a complete immunity from pain. The pathognomonic signs indicative of inflammatory action of the liver, are pyrexia, tumefaction, great tenderness in the hypochondrium, frequent and strong pulse, thirst, furred tongue, and vomiting, sometimes of a bilious, and at other times of a dark-coloured secretion, as the substance of the liver more or less partakes of the invading disease. The bowels are irregular in their action, the evacuations presenting a great variety of appearances, according as the biliary secretion is more or less affected, and the urine is scanty and high-coloured. In hepatalgia, on the contrary, these signs are invariably wanting; there may exist, indeed, constant pain and tenderness over the region of the liver, increased to a certain degree by pressure, but manifest exacerbations, even in the worst cases, occur, which are sufficiently indicative of its paroxysmal character. The functions of the organ may proceed uninterruptedly as in its healthy condition. The tongue may be quite clean, or sometimes, in the centre, there may be a gentle creamy fur, and the urine is generally increased in quantity, and is of a lighter color than ordinary.” *Treatment of Hepatalgia.*—“Gentle purgatives, combined with colchicum, ipecacuanha, and

hyosciamus, will seldom fail to work a speedy cure; and if the constitution have suffered from protracted, unmitigated pain, alkaline vegetable tonics will effect that which we might in vain expect from the rough, insoluble mineral preparation.—*Dr. Allnatt. Medical Gaz.*

Emetics in Bronchitis. By JOHN HIGGINBOTTOM, F. R. C. S., Nottingham.—I have found an emetic dose of ipecacuanha a very valuable remedy at that stage of bronchitis where a sudden, low, or sinking state has come on with oppression at the chest, and the expectoration difficult, endangering suffocation. Vomiting with ipecacuanha has not only soon relieved these symptoms, but has roused the whole system, and has produced such a decided change, as to render the patient convalescent in a few days. I have never seen the same good effects in such circumstances produced by any other remedy. The two following cases are of that description:

“Mr. D—, aged 60, an inn-keeper, of a gross habit, but not considered intemperate, had been much reduced in consequence of a neglected erysipelatous inflammation of the leg and thigh; this had in some measure subsided, but he had at the same time bronchitis, attended with a troublesome cough, difficult respiration and expectoration. A sudden state of sinking came on, with increased dyspnoea, and a feeble, quick pulse. I gave half a drachm of ipecacuanha in a little water; he vomited at different times for two hours; the lowness and dangerous symptoms were much relieved; he had no relapse of the low or sinking state, and he gradually recovered under a common mild treatment.”

“Mrs. C—, aged 78, had an attack of the prevailing influenza; saline aperients, with diaphoretic and expectorant medicines, had been given for about five days, when a low, sinking state came on, with difficulty of breathing. I was inclined to give an emetic of ipecacuanha as the most probable remedy to afford relief. I named it to her daughter, fearing the old lady would object to it. I was glad to find my patient would take it; and I may here mention the favorable idea patients sometimes have of an emetic, imagining that vomiting enables them to throw up the phlegm. I gave her half a drachm dose of ipecacuanha, which had the desired effect of completely relieving her. I was only required to visit my patient for five more days, she being then quite convalescent.”

The following observations in Dr. Johnson's Review, of April, 1844, are corroborated by the above case, and I have no doubt, will hold good in a variety of diseases, both in the commencement and in the sinking stage of disease:—“The use of emetics (I would say ipecacuanha, from the great safety of its operation) is far too much neglected in the present day, and most practitioners are unnecessarily timid about using them to old patients; a single emetic will often effect more good in the course of a day or two, than other remedies in a week or two.”—*London Lancet.*

True and False Mesmerism.—Dr. CHARLES RADCLYPPE HALL, of London, in a series of Articles in the Lancet, on the Rise, Progress and Mysteries of Mesmerism, in all ages and countries, deduces the following conclusions:

"Of the alleged results of mesmeric processes, I believe there are
Proved—Quietude; composure; sleep.

Probable, but requiring confirmation—Traction; muscular rigidity; convulsions; heightened sensibility; diminished sensibility; double consciousness.

Possible, but not very probable—Insensibility to severe pain, for a given length of time, at pleasure.

Impossible, as far as any thing can be so—Clairvoyance; intuition; prevision; community of thought; involuntary and complete subjection of mind to the mesmeriser.

And, lastly, I believe that we have not a shadow of evidence in support of the existence of any new agency, whether designated mesmeric, magnetic, occult, or by any other name."

Up to the present hour, we know of no Medical Journal, either in Europe or in this Country, that looks upon mesmerism with the least allowance.

METEOROLOGICAL OBSERVATIONS, for July, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west Wash. Altitude above tide 152 feet.

JULY	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sun rise.	4, P. M.	Sun rise.	4, P. M.		
1	64	87	29 74-100	29 74-100	w.	Fair.
2	58	92	" 74-100	" 75-100	s.	Fair. [8-10 in.
3	70	88	" 75-100	" 66-100	s.	Cloudy—shower at 5, P. M.
4	70	90	" 66-100	" 66-100	n.	Flying clouds.
5	73	86	" 75-100	" 80-100	s. E.	Variable.
6	70	90	" 91-100	" 86-100	s. E.	Variable.
7	72	93	" 94-100	" 86-100	s.	Fair.
8	76	97	" 85-100	" 80-100	s.	Variable—thunder.
9	76	94	" 77-100	" 74-100	s. E.	Cloudy.
10	73	80	" 76-100	" 74-100	s. E.	Rain 8-10 inch.
11	72	81	" 76-100	" 73-100	n. W.	Fair.
12	72	88	" 72-100	" 65-100	n. E.	Variable—showery—thun.
13	72	78	" 70-100	" 70-100	s.	Cloudy—showery, do.
14	72	86	" 70-100	" 70-100	s. W.	Variable—showery, do.
15	73	87	" 70-100	" 70-100	s. W.	Variable—showery, do.
16	73	87	" 72-100	" 75-100	s. W.	Variable, do.
17	73	93	" 76-100	" 78-100	s. W.	Variable—thunder, &c.
18	75	96	" 80-100	" 82-100	w.	Fair.
19	74	96	" 80-100	" 78-100	w.	Fair.
20	72	96	" 80-100	" 80-100	n. W.	Fair—flying clouds.
21	76	98	" 80-100	" 78-100	w.	Fair, do.
22	77	100	" 69-100	" 66-100	w.	Fair, do.
23	76	100	" 64-100	" 62-100	E. & W.	Fair—12 m. change of wind.
24	76	93	" 67-100	" 69-100	n.	Fair.
25	65	93	" 70-100	" 70-100	s. E.	Variable.
26	75	91	" 65-100	" 55-100	s. W.	Cloudy—blow. [dy, blow.
27	78	92	" 54-100	" 50-100	w.	Th. & light. last night, clou-
28	71	92	" 64-100	" 67-100	n. W.	Fair.
29	62	96	" 65-100	" 60-100	s. W.	Flying clouds.
30	75	92	" 52-100	" 45-100	s. W.	Do. do. thunder, &c.
31	68	91	" 58-100	" 66-100	w.	Fair.

13 Fair days. Quantity of Rain, 1 inch and 6-10.

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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Observations on the Soil, Climate and Diseases of Liberty County, Georgia. By JOHN M. B. HARDEN, M. D.

Liberty county in Georgia is situated between $31^{\circ} 38'$ and 32° north latitude and the 4th and 5th degree of longitude west of the meridian of Washington in the District of Columbia. It extends from the Atlantic ocean on the east, where it takes in the Island of St. Catharines, sixty or seventy miles into the interior, where it is connected with Tattnall county on the west. At this latter point it has a breadth of between thirty and forty miles, but at its eastern extremity it is narrowed to a distance of ten or fifteen miles. It is bounded on the north by the Midway river, and partly by the Canouchie, which touches it on the northwest, and on the south by the south Newport river, and partly by the Alatamaha, and has a superficial area of nearly 1800 square miles.

SOIL.—In respect to its soil, Liberty county may be divided into two distinct portions by a line parallel with the sea coast and equidistant from its eastern and western limits, extending along a ridge of land which is the commencement of what is commonly known as the "*Sandhills*."

*From two observations made in 1842, by means of two Gnomons of my own construction, I found the latitude of Bulltown swamp, at the southern terminus of the county, to be $31^{\circ} 38'$ after making corrections for Sun's semidiameter and horizontal parallax.

The eastern portion is intersected in every direction by many large and dense swamps, which are the tributary branches of the Midway, north Newport and south Newport rivers; taking their rise at the ridge of the Sandhills in what are called "*Spring Branches*," and continuing down to the head of tide-water ten or twelve miles from the ocean. The surface is very level, with a gradual but imperceptible descent towards the coast. The soil is for the most part composed of sand* and clay in various states of intermixture, in some places the sand, and in others the clay seeming to predominate. In the neighborhood of the swamps the clay is very pure and tenacious, and when mixed with much vegetable matter, it assumes a very dark color and is known as "*Blue Clay*." This blue clay, with a rich, vegetable mould, form our most valuable soils for the culture of Cotton (*Gossipium Barbadosense*) and Corn (*Zea maize*)—and when combined with Marle, it seems to be inexhaustible.

The western portion at the ridge has a very evident, and in some places, a very abrupt rise of from 10 to 15 feet, and then with a gradual ascent towards the west, it assumes the same level aspect with the eastern portion, until it reaches the limits of the county. The soil here is mostly sandy and barren, except in the immediate vicinity of the branches which are given off by the Alatomaha on the south, and the Canouchie on the north. The sand varies in depth from 4 to 8 feet, and probably even more in some places; and in reflecting upon the appearance presented, we can hardly resist the impression that this ridge was at one time the limit of this part of our continent, and that these sands were the downs cast up by the waves of the ocean. In the midst of this sandy waste are found two or three ponds or lakes, which are worthy of notice. They are nearly circular, having a circumference of about four miles, and discharge themselves by small outlets into the Alatomaha and Canouchie—they are surrounded by a thick growth of dwarf-bays† and andromeda.‡ In approaching them, you come, as it were, to a large clearing, and upon entering, you find nothing in the form of trees, except dwarf or stunted pines. The surface is covered over with sphagnum and ferns, and here and there clumps of the andromeda and the bay, intertwined with the vines of the smilax.¶ The soil on the top is nothing but a complete mat of fern roots, covered with the sphagnum, upon penetrating which, you may sink a rod to

* See Appendix, Note A.

† *Laurus Carolinianus*. ‡ *Andromeda racemosa*. ¶ *Smilax laurifolia*.

any depth, apparently, without finding bottom. The *subsoil* is dark, but when dry has the appearance of snuff, and (as I am informed by an intelligent gentleman,) will burn readily; indeed these ponds have all the features that characterize the peat-bogs of Ireland, the moors of Scotland, and the turf-bogs of the north of Europe.

In both portions of the county the surface is covered over in many places with a very coarse white sand and gravel: this is particularly the case at "*Gravel Hill*."

In several places there are to be found lower and level tracts, of considerable extent, destitute of shrubbery and covered over by herbaceous plants, interspersed with tall pines. These tracts are known among us as savannas. In the adjoining county of McIntosh they are very conspicuous, and running nearly east and west, present very much the appearance of water courses that have been gradually filled up by alluvial deposits from the higher grounds. These savannas are capable, I believe, of great improvement by culture, but they are kept in this waste and barren condition by the custom of allowing fires to sweep over them at least once a year, in order to afford pasturage for cattle. In the summer and autumn they are covered with the most beautiful flowers, &c., and present a fine field for botanical researches.

Although not immediately connected with our subject, I cannot omit to mention the existence in many places of Indian mounds, or tumuli, which were probably used by the Aborigines as places of interment, and in and around them are found various instruments for domestic or warlike purposes—such as, arrows and spear-heads, hatchets, and mills for pounding grain, made of hard stone or flint, and pieces of pottery, made of clay, on which at times various images were curiously wrought.

After penetrating the superficial soil, which, as we have seen, varies greatly in depth at different places, we come down to a bed or sub-stratum of red clay, which is generally from 8 to 10 feet thick; after passing this, we next come to a bed of sand, usually white, and containing gravel or pebbles, either angular or rounded, by attrition. This is the depth to which we have to penetrate in digging our wells, the deepest of which are from 10 to 20 feet. In some places, we come to a kind of sand-stone, of a very dark color, and very hard, when in situ, but upon exposure to the air, it assumes a ferruginous tint and crumbles readily beneath the pressure of the fingers. In some places an ore is found which is very rich in iron.

No fossil bones have, to my knowledge, been discovered within the limits of the county. I have, however, in my possession, portions of a *coprolite*, that was found at the bottom of a well 17 or 18 feet below the surface. It is composed of silicious sand, loosely held together by a small portion of alumine and phos. lime. The proportion of the latter ingredient is so small that I am disposed to regard it as the *coprolite of a graminivorous animal*.

A few feet below the surface, oyster shells of the neighboring rivers may be found in various localities, particularly in the eastern part of the county, from 20 to 40 miles from the ocean. Marble beds also occur in many places, which I have no doubt are the product of the decomposition of the shells of the oyster, (*ostrea edulis*) although I have never been able to identify the shell. The marble is sometimes very rich in carb. of lime, and might be made available as an excellent manure—I have also some beautiful crystals of the sulphate of lime, found in Bulltown swamp.

Petrified wood is dug up at various depths below the surface; and on the north Newport and Midway rivers, the *stumps and trunks of Cypress trees and arrow-heads are found at the depth of 4 feet or more*—a fact which was noticed by Bartram, in his travels through this State and Florida, nearly seventy years ago—and in some places I am informed, a black, soft mud, has been found, having *all the smell of "Marsh Mud."*

These various facts seem to me to shew conclusively that the soil of this county, and more particularly the eastern portion, is entirely alluvial, and, like that between the Alatamaha and Turtle rivers, described by Mr. J. H. Couper in a paper read before the Geological Society of England, *belongs to the post-pleocene epoch*.

The Sylva and Flora of this county is unsurpassed* by those of any other district of equal extent in the world. Our swamps abound with the *tallest and most magnificent trees of various kinds*, and the open woodland is covered over at certain seasons with the *richest and most beautiful plants and shrubs*—

"Arboribus varia est natura creandis
Namque aliae, nullis hominum cogentibus, ipsae
Sponte sua veniunt composque et flumina late
Curva tenent."—VIRGIL. *Georgics* lib. 2.

It is true, that some of our most luxuriant forests have fallen under the ruthless attacks of man for agricultural purposes, and from a mis-

* See Appendix, note B.

taken system of culture, much of our virgin soil has been worn out and left in the garb of widowhood ; but it is to be hoped that greater improvement in agricultural science will cause the most of it to be reclaimed, and although disrobed of its natural beauty, that it may yet put on the mantle of art and civilization.

CLIMATE.—In determining the temperature of our climate, five observations of the thermometer have been taken every day for a period of one year, commencing in August, 1838, and ending in August, 1839. The hours chosen for these observations were as follows: 7 o'clock, A. M., and 1, 3, 7 and 11 o'clock, P. M. From these observations, it appears that the mean annual temperature is $66^{\circ} 41'$. The year 1839, a part of which is included in these observations, was unusually hot and dry, the thermometer rising in the month of June to upwards of 100° . This may tend to raise the mean of this year, but it is probable that the above is not far from the mean of any given series of years.

Although my observations with the thermometer have not been sufficiently long continued to warrant it, yet I have no doubt that there is a small oscillation in the mean temperature of our climate during a certain period of time. This seems evident from the effects of the climate upon some of our tropical and even indigenous plants. Thus there are seasons with us in which the cotton plant is scarcely killed, and assumes nearly the character of a perennial, and again it is so injured by the cold that hardly a single root will sprout up in the ensuing spring. The orange tree (*Citrus Aurantium*) will for many years do well amongst us, particularly along the sea-coast, when a winter or number of winters will succeed, in which they are nearly destroyed. In the winter of 1834-'35, which was the coldest winter recollected by the "*oldest inhabitant*," they were killed even in Florida, to the great pecuniary damage of the citizens of that State. Indeed so intense was the cold, that the hedges made of the Cherokee rose, (*Rosa levigata*), one of our most hardy perennials were very seriously injured.

The annual range of the thermometer during this year was 83° —the minimum on the 24th December, 1838, being 18° —the maximum in June, 1839, being 101° —I am disposed to believe that this is not far from the mean annual range, although we are subject to the extremes of Zero during the winter, as was the case in January, 1835, and 100° in the summer, as happened in 1830. The *greatest range observed in any one month* took place in March, 1839, when the ther-

thermometer on the 5th was at 22° , and rose on the 28th to 82° ; and in December, 1838, when the minimum was 18° and maximum 78° . The least monthly variation was 22° in August, 1838, and 23° in July, 1839.

The mean diurnal variation for the whole year was $17^{\circ} 16'$ —the greatest variation taking place in the winter and the least in the summer months—the greatest mean diurnal variation took place in the month of March, 1839, and was $22^{\circ} 19'$ —the least in the month of September, 1838, and was 9° . The greatest variation between the maximum and minimum for any one day, was 43° in March, 1839—the least in June and July, when it was only 14° . In the months of June, July, August and September, the greatest diurnal range was not more than 18° —proving conclusively what has been stated above, that the temperature is far more agreeable during the summer, than at any other season of the year.

The months, whose mean temperature corresponds most nearly with the mean temperature of the year, are April, the mean temperature of which is 68° —and October, whose mean temperature is 65° . These are decidedly the most pleasant and agreeable months in the year.

The coldest month observed was January, the mean temperature of which was 51° . There can be no doubt that the coldest weather we experience takes place after, rather than before, the winter solstice, and I believe January is usually our coldest month. So, too, our warmest weather is for the most part after the summer solstice. In 1839, the mean temperature of August was 83° , which was also the mean for the month of June. This last month, however, was unusually hot. The mean for July was 80° .

The temperature of our wells I have found to be in the summer 74° —which is 8° above the annual mean. I have no doubt that they are measurably affected by the temperature of the air, on account of their being at so little depth below the surface.

The hottest part of the day is after the sun passes the meridian, and generally, unless interrupted by clouds or rain, there is a gradual rise of the thermometer from the rising of the sun until 3 o'clock, P. M., when it attains its maximum. After this, there is a gradual fall, until 11, P. M., when it is nearly as low as at any other part of the day. I find the mean difference between the temperature at 3 o'clock, above that at one o'clock, to be about .65 of a degree for the whole year—so that the hour of 3, P. M., may be considered the warmest part of the twenty-four hours.

I have made no observations upon the barometric state of the air, nor have I measured the annual amount of water that falls, my observations having been confined exclusively to the general conditions of the weather, in respect to clouds, wind and rain. By consulting, however, the meteorological tables kept in Savannah by Mr. Oemler and Dr. Posey, I find that the mean quantity of water that fell at that place during six years ending in 1842, was 41.52 inches. It is probable that this is not far from the quantity that falls annually in this county.

Many of our heaviest rains seem to be irregular, but I am inclined to believe that long continued pluviometric observations will serve to show that we are situated in that zone which has been happily termed *sub-tropical* by M. de Buch—where the climate, in respect to seasons of rain, partakes of the nature of that within the Tropics—but the semestrial period of rain within the Tropics, instead of passing into one *trimestrial* period, which is *estival* in our hemisphere, as stated by M. Fournet,* seems to me to be divided into *two trimestrial periods*—one of which is *estival* and the other *hyemal*—the latter taking place in the months of January, February and March, and the former in the months of July, August and September, or probably more correctly the first from the winter solstice to the vernal equinox, the latter from the summer solstice to the autumnal equinox.

By consulting the Savannah tables above referred to, it appears that the mean quantity of rain in inches that fell during the first trimestrial period for six years, was 8.04—for the second during the same time, 17.72—whereas the quantity for the intermediate periods from April to July, and from October to January, was for the first 10.50 inches, and for the second 5.26 inches. The apparent contradiction to the law assumed above in the mean quantity for the period between April to July, is explained by the fact, that an annual quantity of water fell during the month of June, 1838, amounting to 10.03 inches, and again in May, 1840, when it amounted to 10.08. Omitting these, the quantity would be probably more near to the mean average for that period.

There can be no doubt that our *irregular rains* are sometimes our *heaviest*—so that if we are guided alone by the absolute quantity of water fallen, we might be led to doubt the correctness of the law; whereas we may have *rainy seasons* when very little water actually

* *Annales de Chimie et de Physique*, N. S. Tome onzième p. 116.

falls. By referring to the same tables, I find that taking the number of rainy days we have for the first trimestrial period, an average of 19.25—for the second 14.25—whereas for the other periods, we have for the first 11, and for the second 13.75. From our own observations, I find that of 90 rainy days, 18 occurred during the first, and 43 during the second trimestrial period, and for the two others, 17 for the first and 16 for the latter. Of 119 clear days, 37 occurred during the period from January to April, 11 from July to October, 31 from April to July, and 40 from October to January. From general observations of the weather for some years past, I am decidedly of opinion that our dryest months are April and October, and our wettest the months of February and August. The dew-point always appears to me to be highest in the latter month. There is then more of sensible perspiration from the skin, and leather, wood and clothes, are more liable to mildew and mould, and iron to rust.

As we are subject to great extremes of temperature, so we are also liable to great extremes in regard to the quantity of water that falls at different seasons. Sometimes we have seasons of great rain, and sometimes seasons of great drought. We are subject, at times to great inundations from excessive rains:

Sæpe etiam immensum cœlo venit agmen aquarum,
Et fœdam glomerant tempestatem imbribus atris,
Collectæ exalto nubes.—VIRGIL. *Georgics*, lib. 1—332.

The quantity of water that falls in a short time is almost incredible. These rains are for the most part irregular, but they *more commonly occur during one of the above named trimestrial rainy periods*. The greatest freshets within my recollection occurred in March, 1831, and March and September, 1841. At these times, the swamps and rivers overflowed their banks and produced great injury to flocks and growing crops, as well as to the roads and bridges. In 1841 we were two weeks without a mail from Savannah, although running previously three times a week. The rise of water in our swamps is fully six to eight feet. The year 1839, and the present year up to this time, have been attended with the greatest drought that I remember to have observed.

Thunder storms are very common in our climate, and are at times very disastrous in their effects. It is a curious fact in regard to them, that they always have a tendency to the sea-coast. As soon as they are formed they move onwards in *this direction*, and, *unless interrupted by winds*, I think I have observed a *marked disposition to*

follow water courses. During the falling of the rain from a thunder cloud, I have often noticed that there is a *strong current of air setting in every direction from the cloud*, so that a vane on this account always points *towards the cloud* when near enough to be influenced by it, both when coming up and after it has passed, provided *the rain is still falling.*

Our winds are, for the most part, very variable—if we divide them into easterly and westerly, by a line passing from north to south, I find that for the period of my observations, the wind was easterly 124 days, and westerly 138 days. Upon looking at the prevailing winds for each month, I find that they are more prevalent from the west, during the winter, and more from the east, during the summer months. During the warmest days of spring and summer, we enjoy the delightful sea-breezes that comes up about 10 or 11 o'clock in the morning, and prevail until 3 or 4 in the afternoon, when they die away and give place to the land-breeze, which sets in an opposite direction during the night. Very near the sea-shore, these sea-breezes continue much longer, and may even blow during the early part of the night. At a distance of forty or fifty miles from the coast I believe they are rarely if ever felt.

During our *estival rainy season*, we are subject to what is commonly known among us as "*north-east weather*," when the wind prevails from that direction, sometimes without, but most commonly with, clouds and rain. I am inclined to believe that these winds are really the *trade winds* of the tropic, carried beyond their northern limits probably by the *influence of the sun*. However this may be, it is a remarkable fact, that these winds affect a *certain periodicity*, and are apt to *recur at weekly or semi-monthly periods*. It is at these periods that we are liable to have the most dreadful hurricanes or typhoons. The most memorable of these, of which I have any account, occurred on the 15th August, 1752, "which was in Carolina, the most violent that was ever known since the settlement of the English there, and which, in many places, left not one tree in twenty standing."—[See an account of the Congregational Church at Midway, by John B. Mallard, A. M.] Another occurred on the 8th day of September, 1804, which, from all that I can learn, must have been equally violent. I was myself a witness of the last great hurricane, that took place on Wednesday night, the 14th September, 1844—It commenced to blow from N. E. about 3 o'clock in the afternoon, and gradually increased until probably 1 o'clock at night, when its vio-

lence was greatest—the wind then suddenly shifted S. E., and soon began to moderate. The night was very light, although I do not remember the state of the moon. The rain, or rather mist, that fell, had a saltish taste for miles in the interior, evidently being mixed with spray from the sea-water. The appearance of desolation that was presented to the eye on the next morning, was awful in the extreme. There is a disposition to these storms to a greater or less extent every year, and we frequently experience slight ones : indeed we always have some indications of all the hurricanes that take place in the West India Islands.

Tornadoes are by no means frequent, but we sometimes have them. Besides one or two of which some traditionary account still lingers with us, as having passed through the county many years ago—I remember one that took place in March, 1836—I have myself observed the track ; traces of which are probably still visible—Its course was from S. W. to N. E.; almost every tree of any size was prostrated by it, in its path, and the most of them turned in towards the axis of the storm. Its track was probably fifty yards in width, and passed through the north-western part of the county.

Although not confined to our county, I desire to record here the following remarkable meteorological phenomena : One week after the great hurricane of 1804, on the night of the 15th of September, there was an appearance of a very large and splendid meteor, which caused great consternation. The moon was shining brightly at the time, when suddenly there was heard a rumbling noise like distant thunder, which gradually increased until it was sufficient to awake the sleeping, and at the same time a bright light was seen, superior much to the light of the moon. This noise was continued for a few moments, and subsided as it had commenced. The direction is supposed to have been from west to east. There can be no doubt that this was an ærolite, but whether it fell to the earth or not, I am unable to say. Another meteor of a similar kind, although not as large, passed over the county on the night of the 10th day of July, 1826, at about 11 o'clock.

All of us remember the very remarkable meteoric shower that took place on the night of the 12th November, in the year 1833—I was called up about a half hour before day-light, and watched them until they were very faintly visible—The meteors fell in almost uninterrupted succession, in a direction apparently very little inclined to our horizon—Many of them were larger and brighter, and left lumin-

ous trains that were visible for some seconds. The scene was far more magnificent than any I had ever witnessed, and to describe it accurately defies all power of language—it was such a scene as makes the beholder gaze in mute astonishment, and the moral impression of which can only be conveyed to others by expressive *silence*.

DISEASES.—Liberty County has shared the fate of most newly settled districts where there are rich lands, and for many years after its first settlement was very sickly;* but for ten or fifteen years past, according to the testimony of all, it has proved to be as healthy as any other county with the same population in our State. I am sorry that no public records are now kept, by which I might ascertain with certainty, the proportion of deaths to the number of inhabitants; but from my observations, I am sure that for ten years past, the proportion has not exceeded two per cent. per annum.

Many cases have contributed to bring about this state of things. For many years after its first settlement the culture of rice was the chief business of the inhabitants. At present the dry culture system is every where adopted, and nothing but cotton and corn is raised as articles of export. Some of the people early introduced the custom of removing from their plantations during the summer and fall seasons, but it was not generally adopted until of late. It is now very rare for any family to reside on their plantations during the sickly seasons, and indeed many have entirely abandoned them for healthier locations in the pine lands of this or the adjoining county of McIntosh. But probably a more important cause may be found in the change of habits of the people. The black population is better fed and clothed now than formerly, and the habitations of both white and black are greatly improved. The use of intoxicating drinks has been almost entirely given up—and I cannot but add, that the system of practice, both domestic and professional, has been greatly altered for the better. Less drastic and poisonous medicines are now employed, and indeed the heroic treatment of the early schools of medicine once followed in this country has been exchanged for the milder and more rational method of *assisting Nature and guarding against the "nimia diligentia Medici."*

Epidemics may be said to be entirely unknown among us, if we except the Influenza, which in its progress through other parts of the

* See Appendix, note C.

country sometimes makes its appearance here. The Asiatic Cholera in 1832 prevailed to some extent on the Ogechee river, in Bryan county, within a few miles of Liberty, but not a case occurred within the limits of our county. There are seasons, however, in which our common endemic diseases are far more prevalent and fatal than at other times, although I have not been able satisfactorily to refer this partially epidemic character to any particular constitution or condition of the atmosphere. I am disposed, however, to believe that dry seasons are more healthy than those which are attended with excessive rains or dampness of the air.*

Sickly seasons have appeared to me to observe a certain periodicity, or to prevail once during a cycle of years. This cycle, so far as I can determine from a very general and brief experience, seems to be a period of about ten years, and may correspond with the cycle through which passes the small oscillation in the mean temperature of our climate. Thus I am informed that the years 1817 and 1820 were unusually sickly—so also was the year 1830. The last sickly year that we have had was 1840.

In regard to the relative salubrity of the separate seasons of the year, I would give it as my opinion, that there is more sickness during the autumn and winter, and less during the spring and summer. Winter diseases are far more fatal than summer diseases. The healthiest month in the year is probably May.

The only contagious diseases to which we are subject are, Pertussis or Whooping cough, Rubeola or Measles and Syphilis—Varicella or Chicken pox sometimes prevail, Variola never—Scarlatina has sometimes shewn itself in a sporadic form, but has never extended far within my observation—Whooping cough and Measles are common, and I have known them to exist together on the same place, and, if I mistake not, in the same person: which has led me to suspect that the two diseases are *isopathic*, or in other words, that whooping cough arises from measles in the lining membrane of the air passages. The *venereal disease* is probably more common than my observations would lead me to believe; but being a disease that seeks concealment, it is often cured in its simpler forms by the aid of empiricism, without the advice of the physician. It is confined almost exclusively to the black population. Gonorrhœa is universally known among them as "*running reins*," and is attributed in every instance to

* See Appendix, Note D.

blows on the back or perineum, or some violent strain. The history of a very curious case has come to my knowledge—in which a man with gonorrhœa communicated it to his wife during pregnancy. The child, after birth, was affected with a disease which was supposed (by a physician, I think,) to be syphilitic, and died. I am sorry that it did not come under my own observation; but still it tends to confirm a suspicion long entertained, and upon which the medical world is yet divided, that gonorrhœa and syphilis are *isopathic* affections.

But by far the most common diseases of our climate are the *febrile* and *inflammatory*. During the course of my experience, I have met with only two species of *essential fever*—one, and by far the most common, is our “Marsh-miasmatic fever,” an account of which, together with its various modifications, I have given in the October number of the American Journal of the Medical Sciences for the year 1844. The other has been described in the August number of the same Journal for the year 1840.

The form in which the “*marsh fever*” usually makes its appearance is the double tertian, with one severer and one milder paroxysm. The first paroxysm, or the more severe, is marked by a more decided chill or cold fit, and by a more complete apyrexia, usually beginning in the morning and leaving in the afternoon, so that the patient will spend a comfortable night, and the next morning feels better; but sometime after midday another paroxysm comes on in a more disguised or insidious manner, which continues all night and runs into the paroxysm of the next morning, without any perceptible remission, except in the *heat of the skin*. The crisis or acme of the fever is usually at the third or fifth tertian paroxysm, or on the fifth or seventh day.

The other species of fever I have supposed might be the Dothinenterite of the French. If it is not, it is, so far as my reading has gone, an undescribed form. I have called it the SANDHILLS FEVER, from the fact that I have met with most cases of it in that part of the county. Its progress is slow, and its duration from twenty to thirty days. It most commonly affects the young—all the cases I have seen have been of persons under twenty years of age.

True Typhus, the typhus gravior of authors, which I take to be the same as the so-called camp, jail and hospital fever, I have never seen, nor do I know any physician here who has seen it. Being the product of crowded and ill-ventilated places, it is not to be supposed

that it would be apt to appear in the country. One case of low Yellow fever, attended with "*black vomit*," brought from Angola Geo., during the prevalence of the epidemic there, I attended in this county, in the fall of 1839. This case, in my opinion, differed in an essential particular, from the case of a foreigner who was attacked with our common Remittent, in October, 1842, which afterward assumed the *congestive form and terminated with black vomit*.

Puerperal fever occasionally occurs. This fever, I believe, is entirely *isopathic* with erysipelas—or in other words, nothing more than erysipelas of the womb and its investing membranes. This was the opinion of the Father of Medicine, as appears from the following remark in his aphorisms: "If a pregnant woman be afflicted with Erysipelas of the womb, it will prove fatal to her."—[*Hippocrates: Aphorisms*, sectio 5th—43. My reasons for this opinion I hope to give at some other time. Milk fever is common after accouchement, but rarely attended with serious consequences. It is sometimes followed by collections of matter of a milky purulent character in the mammæ, and sometimes by phlegmasia dolens. The best prophylactic against both results is the *early application* of the child to the breast.

* Inflammatory affections prevail mostly during the winter months. Those of the head are extremely rare. I have only met with one case of acute inflammation of the brain or its investing membranes and this occurred in a child about three months old. It terminated in effusion of water within the cranium.

Inflammations of the respiratory organs are most common. Croup in its inflammatory form is rare. Laryngismus stridulus is the affection mostly known among us as croup. Pneumonia, bronchitis and pleurisy are here, as almost every where, of frequent occurrence in relation to other diseases. *Gangrene of the lungs* sometimes occurs.

Acute inflammation of the abdominal organs is not very common. Acute hepatitis is, in my opinion, far less common than it is generally supposed to be. Functional disorder is frequent, but I have rarely met with any violent acute form of disease that could be referred with certainty to the liver as its primary source. It seems to be an universally entertained opinion, that in hot climates the liver must be often diseased; but according to my observation, that organ is

* I use this term as commonly understood, without pretending to endorse the correctness of its application to the many different diseases included under it.

then blamed for disorders of which it is entirely guiltless. Dr. Johnson's works on *Tropical Climates* and *Diseases of the Liver*, are, I fear, somewhat of a libel upon both topics of his *very fertile and ingenious pen*. Were intoxicating drinks, the use of opium and obacco,* the *immoderate eating* of animal and vegetable food, and more particularly the former, entirely abandoned, and people to live with a *strict regard to temperance in all things*, the liver would no doubt perform its functions with as much regularity and certainty as any other organ in the body—and *the equable and balmy air of the tropics would be redolent of health*. For my own part, I cannot see why the liver has been so much singled out by authors as the *strong hold of disease*, as it were, and so many articles of the *Materia Medica* collected together under the name of Cholagogues for its *especial benefit*. Every young practitioner is for the most part directed to look to it in almost every case, and he begins his career with the "*Sampson*" of the *Materia Medica* as the ground of all his hopes, and whenever put to it to tell, in obstinate cases, what is the matter with his patient, clothes all his misgivings in the sapient reply, that it is *Chronic Hepatitis*.

A paralytic state of the liver and spleen very frequently arises as sequelæ of intermittents when long continued, and should no doubt be treated in a similar manner. They are of far less common occurrence now than formerly, which is to be ascribed, I think, mainly to the fact that blood-letting is not pushed to so great an extent, and quinine earlier resorted to, in the treatment of this fever now, than it was even a few years ago. It is but just to remark here, that the "observations" of Dr. Wm. C. Daniell "on the Autumnal Fevers of Savannah," published nearly twenty years ago, contain the first efforts that have been made to introduce a practice in our autumnal

* Excess in eating and drinking is injurious to health in three different ways. It immoderately strains and thereby weakens the digestive organs; it prevents digestion, since it is impossible that in so large a quantity every particle should be digested properly, and it produces crudities in the colon and morbid humours. . . . Finally, spirituous liquors, of whatever name they may be, must, by all means, be considered as substances that shorten human life. They are a liquid fire, accelerate the consumption of the powers of life in a fearful manner, and in fact transform life itself into a process of combustion. Moreover, they create cutaneous diseases, aridity and torpor of the fibres, premature old age, cough, asthma, pulmonary complaints, and—what is worst of all—an awful dullness and insensibility, not only with regard to physical, but also with regard to moral impressions.—*Hufeland Makrobistik*, 2d; 39, 44.

fevers, which in a modified form is beginning to be universally adopted.

Bowel affections are among our most ordinary diseases, but in most cases may be traced, I think, to errors or irregularities in diet, indigestion and dyspepsia, and rarely call for medical aid; but I think the former is common, while the latter is rare. Cholera morbus, diarrhea and dysentery, most commonly arise from acrid or unwholesome food or drink. The latter prevailed to some extent in 1827, in the form of a local epidemic, and was very fatal. This was, however, before my admission to the practice of medicine, and I know very little about it. Cholera infantum sometimes, although rarely, occurs and generally terminates in marasmus.

Inflammatory rheumatism is not frequent, but the neuralgic form, or what is known as chronic rheumatism, is more common. Gout is rarely met with, and probably will be unknown to the coming generation. Calculous affections are extremely rare—I have never met with a case; and I have never heard of a case of stone in the bladder within the limits of our county. Phthisis pulmonalis or consumption, is also very uncommon among our native population—I have only seen three cases among the whites, and about the same number among the blacks, during the course of fifteen years. Scrofulous enlargement of the lymphatic glands, however, is frequently seen among the latter. This seems to indicate that our climate is not favorable to the development of scrofula in the internal, but rather in the external organs, for I hold scrofula and tubercular consumption to be truly *isopathic affections*.

Two or three cases of Goitre have come to my knowledge; but surely the remark of Juvenal, in reference to the Alps, has no application here—

“Quis guttur tumidum miratur in Alpibus.”

Of the cachexies, however, among the most familiar to us may be enumerated cachexia africana or dirt-eating, and dropsy. My reading and observations in regard to the former disease have led me to the following conclusions:—The eating of earthy substances has at all times prevailed to a greater or less extent among certain classes of men. Celsus distinctly alludes to it as a cause of disease in his day—“*Quum diu color sine morbo regio malus est, hi vel capitis doloribus conflictantur vel terram edunt.*”—[*Medicina*, lib. 2.]—and Baron Humboldt mentions it as being common among certain tribes of American Indians, as well as other people in various parts of the

world.—[*Personal Narrative passim.*] Among the negroes here, I believe it to be a very common habit, and one that is taught them from childhood. I remember to have eaten clay myself when a child from the example which was set me by negro children.

It does not appear that the habit is *necessarily productive of ill consequences*. This was the observation of Humboldt in regard to the Otomacs and others. Among us, I know that it does not in *most cases bring on disease*. It is, in my opinion, almost universal among negro women *who are in a state of pregnancy*. I have seen places in the fields where the clay has been recently dug at by their fingers for the purpose of being eaten. I have also known a pregnant female to eat *chalk in large quantities, and declare it to be a most delicious morsel*. In such cases, the desire no doubt arises from *demand on the part of the system for inorganic elements, and more particularly lime, and should be gratified in a proper way*. If birds are entirely deprived of all substances which contain lime, their eggs will be soft, as I have observed to be the case with fowls that have been long kept in a coop, and I have seen them, under such circumstances, eat pieces of mortar thrown into them with the *greatest avidity*.

The disease connected with dirt-eating is *evidently chlorosis*. It is for the most part confined to females, and appears to arise from *mal-assimilation and defective hæmatisis*, whereby the *blood is nearly deprived of its coloring matter*, although the relative proportion of albumen and fibrine is in a great degree preserved. That this disease may be brought on by eating clay, *when indulged in to too great an extent*, I will not deny; but it is certain that I have seen it when the fact of eating it could not be proved, and indeed where the probabilities were strongly against *the suspicion*. It is certain, however, that the disease, when it occurs, is always aggravated by it, and that it *should be prevented if possible*.

I believe the disease to be curable—and I will here depart a little from my plan, and give the *treatment*, which I believe to be best adapted to its cure. In all cases, if the patient is young, and the pulse and state of the system will allow it, I begin the cure by *blood-letting*. In two cases I bled the patients from six to eight times in the course of two or three months, taking away from half to one pound at a time, and when I commenced, the blood would hardly have reddened a white handkerchief. My object in doing this is not to subdue *inflammation*, but to remove from the vessels an impure fluid,

which is not blood, so that the system may have a better opportunity of making good blood. The blood-letting is intended to act the part of a *vascular cathartic*. My next object is to stimulate the digestive organs to the proper performance of their functions, and this I believe to be best accomplished by occasional mercurial cathartics, and the continued use of the *sesquichloride of iron*—a preparation which is not found in the shops, but which can be very easily made. *The diet should be generous, and consist of such articles as they fancy most.*

Dropey, as stated above, is very common, and appears in the forms of hydrothorax, ascites and anasarca. A great proportion of the older negroes die of this disease. In the young it sometimes occurs, but in them it is almost always curable. From the result of *one case recently* under my care, I beg leave here to suggest an *early* resort to paracentesis in cases of ascites in young persons.

Passing over some other affections, which are either common every where, or too rare to be regarded as peculiar any where, I would conclude this brief sketch by a few observations in regard to the *Surgical, and Obstetrical practice* of the county.

Surgical cases are of extremely rare occurrence—I know not whether this is to be attributed to the want of subjects, or to the want of *confidence* in the art itself, arising from the small number of striking cures that have been performed among us by its aid. Some few cases of dislocations or fractures, call for surgical interference, and occasionally a small encysted or sarcomatous tumor has to be removed, or a limb to be amputated—omitting these and such-like, I beg leave to record the following cases, which have occurred in my practice :

The first was an operation on both eyes, for cataract, by depression or couching, in the case of a negro man about 80 years of age. The instrument used was a No. 6 or 7 sewing needle, which I ground to suit myself, and then fixed into a handle. The case terminated favorably. The second was a case in which I extirpated the right mamma for a carcinomatous affection. The wound healed readily, and the patient appeared to be well for one year, when the disease returned, and although removed a second time, the woman died in six months after. On the 2nd March, 1843, I divided the tendo achillis for talipes equinus, and applied an apparatus of my own construction upon the principle of Stromeyer's. The operation has been as successful as could have been expected. The last two cases were both *hyarthrosis* of the knee joint ; in the first of which I operated

by the INTRODUCTION of a *seton*, a practice which I had never heard of before. In this case the fluid was so much like blood that I thought I had punctured an aneurismal tumour.* In the second case, I simply opened the sac, and introduced tents and injections of salt and water. Both cases have terminated favorably.

Obstetrical cases, requiring either instrumental or manual assistance, are equally rare—of the former, I have only met with one, and that was a case of *locked head*, in which the child was dead, and the woman so much exhausted that I thought it absolutely necessary to perform embryotomy. The woman, however, was too far gone to recover. Besides this, the only cases that have come under my care requiring manual assistance, are the following:—One case of footling, in which the long diameter of the head was engaged in the short diameter of the superior strait; one case of face presentation, in which I rectified the position of the head, without turning; and three cases of shoulder and arm presentations. The first of these has been reported in the August No. of the American Journal for 1833. In the last two, the delivery was effected by turning: one terminated favorably—the other died of puerperal fever. I have also seen one case of severe hæmorrhage during labor, in which turning was necessary in order to expedite delivery. Cases of retention of the placenta are common. I have met with one case of miscarriage, in which it was *adherent*, attended with most profuse hæmorrhage.

In closing these observations on the Soil, Climate and Diseases of Liberty County, I am tempted to use the language of Pliny, in praise of his beloved *ITALIA*—of the justness of its application to *this county*, let others judge. "*Nec ignoro ingrati ac segnisi animi existimari posse merito, si breviter atque intranscurser ad hunc modum dicatur terra nomine Deum electa quæ cælum ipsum clarius faceret et colloquia humanitatemque homini daret. Sed quid agam? tanta nobilitas omnium locorum, tantæ rerum singularum populorumque claritas tenet—Jam vero tota ea vitalis ac perennis salubritatis coeli temperies, tam fertiles campi, tam aprici colles, tam innoxii saltus, tam opacæ nemora, tam munifica silvarum genera tot annuum fortiumque uberitas.*"—(*Natural History*, lib 3. 6.)

* This case, I believe, has been reported in the New-York Journal of Medicine, but I have not seen the number.

APPENDIX.

NOTE A. I have made no analysis of the soil of the county, but I subjoin here analyses of two specimens, from different parts of the county, by Mr. Coating, formerly State Geologist, which will give some idea of its constituents.—(Vide his *Essay on the Soils of Georgia*, p. 111.)

1ST ANALYSIS		2ND ANALYSIS.	
Water of absorption.....	10.00	Water of absorption.....	1.98
Organic matter.....	8.00	Coarse and fine sand and gravel..	78.00
Sulphur.....	1.40	Organic matter.....	3.00
Silica.....	54.00	Humate of Lime.....	2.00
Alumina.....	18.00	Phos. and Crenate of Lime.....	4.00
Humin.....	2.00	Apocrenate of Magnesia.....	2.00
Apocrenate of Iron.....	1.00	Sulphate of Iron.....	4.73
Sulphuric Acid.....	2.04	Alumina and Silica.....	5.00
Protoxide of Iron.....	.50		
Magnesia.....	.96		100.00
Phosphate of Iron.....	2.10		
	100.00		

NOTE B. The following catalogue of the phenogamous plants found within or near the limits of Liberty County, will exhibit the *natural growth of its soil*. I am aware that it is very incomplete, and in some cases even inaccurate, but it is sufficiently full and correct for our present purpose. Many plants among us have, no doubt, escaped my notice, and there are some which have been omitted merely because I have not been able satisfactorily to distinguish them. This is particularly the case with species belonging to the natural order of the *Gramineæ* and the families of the *Leguminosæ* and *Compositæ*, and it is possible, that of those enumerated, there are many to which I have affixed a wrong *specific name*. In all cases of doubt, however, I have added a note of interrogation. The most of these plants have been *seen and determined by myself*—a few have been given from the statements of others upon which I thought I might rely: these are distinguished by an asterisk. The list is in alphabetical order.

Acalypha virginica	Amorpha fruticosa	Aristida spiciformis
Acer rubrum	" pubescens	" stricta
Acerates longifolia	Amsonia latifolia	Aristolochia serpentaria
Achyranthes repens	" angustifolia	Aronia arbutifolia
Acorus calamus	Anagallis arvensis	Arum triphyllum
Æsculus pavia	Andromeda ferruginea	" virginicum
Agave virginica	" mariana	Arundinaria macrosperma
Agremonia eupatoria	" nitida	Asarum virginicum
Agrostis alba	" racemosa	Asclepias amplexicaulis
" indica	" speciosa, &c.	" cinerea
" sericea, &c.	Andropogon ciliatus	" connivens
Aira obtusata?	" dissitiflorus	" angustifolia
Aletris aurea	" macrourus	" obtusifolia
" farinosa	" nutans	" paupercula
Alopecurus geniculatus	" scoparius, &c.	" tuberosa
Allium inodorum	Antirrhinum canadense	" verticillata
Amaranthus lividus	Apios tuberosa	Ascyrum crux-andrea
" spinosus	Apocynum androsæmifolium	" hypericoides
Amaryllis atamasco		" pomilum?
Ambrosia paniculata	Aralia spinosa	Asimina pygmaea
Ammi capillaceum	Argemone Mexicanum	Aster carolinianus

Aster <i>divergens</i>	<i>Chenopodium</i> <i>album</i>	<i>Eleusine</i> <i>indica</i>
" <i>diversifolius</i> ?	<i>Chionanthus</i> <i>virginicus</i>	<i>Elodea</i> <i>virginica</i>
" <i>foliolosus</i>	<i>Chrysobalanus</i> <i>oblongifolius</i>	<i>Elytraria</i> <i>virgata</i>
" <i>obovatus</i> ?	"	<i>Epidendrum</i> <i>conopseum</i>
" <i>paludosus</i>	<i>Chrysocoma</i> <i>nudata</i>	<i>Erianthus</i> <i>alopecuroides</i>
" <i>racemosus</i> ?	<i>Chrysopsis</i> <i>argentea</i>	" <i>brevibarbis</i>
" <i>squarrosus</i>	" <i>tricophylla</i>	<i>Erigeron</i> <i>canadense</i>
" <i>tenifolius</i>	" <i>scabra</i>	" <i>nudicaule</i>
" <i>tortifolius</i>	<i>Cicuta</i> <i>maculata</i>	" <i>philadelphicum</i> ?
" <i>virgatus</i> ? &c.	<i>Cissus</i> <i>bipinnata</i>	" <i>strigosum</i> , &c.
Aulaxanthus <i>ciliatus</i>	" <i>hederacea</i>	<i>Eriogonum</i> <i>tomentosum</i>
Azalea <i>nudiflora</i>	<i>Clematis</i> <i>viorna</i> ?	<i>Eriocaulon</i> <i>decangulare</i>
" <i>viscosa</i> *	<i>Cleome</i> <i>cuneifolia</i>	" <i>villosum</i> ?
Baccharis <i>halimifolia</i>	<i>Clethra</i> <i>alnifolia</i>	<i>Eryngium</i> <i>aquaticum</i> ?
" <i>sessiliflora</i> ?	" <i>tomentosa</i> ?	" <i>virginianum</i>
Balduina <i>uniflora</i>	<i>Clitoria</i> <i>mariana</i>	<i>Erythrina</i> <i>herbacea</i>
Baptisia <i>uniflora</i>	" <i>virginiana</i>	<i>Euchroma</i> <i>coccinea</i> *
" <i>alba</i>	<i>Cnicus</i> <i>glaber</i>	<i>Euonymus</i> <i>americanus</i>
" <i>leontii</i> *	" <i>repandus</i>	<i>Eupatorium</i> <i>celestinum</i>
" <i>tinctoria</i>	<i>Commelina</i> <i>communis</i>	" <i>feniculaceum</i>
Batschia <i>gmelini</i>	<i>Convolvulus</i> <i>macrorrhizus</i>	" <i>hyssopifolium</i>
Bidens <i>bipinnata</i>	" <i>panduratus</i>	" <i>linearifolium</i>
" <i>chrysanthemum</i>	" <i>speciosus</i>	" <i>perfoliatum</i>
Bignonia <i>capreolata</i>	" <i>tenellus</i>	" <i>rotundifolium</i> ?
" <i>radicans</i>	<i>Coriopsis</i> <i>gladiata</i>	" <i>scabridum</i>
Bletia <i>aphylla</i> *	" <i>nudata</i> , &c.	" <i>verbenæfolium</i>
Borkhausia <i>caroliniana</i>	<i>Coronopus</i> <i>didyma</i>	<i>Euphorbia</i> <i>corollata</i>
Briza <i>eragrostis</i>	<i>Cornus</i> <i>florida</i>	" <i>cyathophora</i>
Buchnera <i>americana</i>	" <i>stricta</i>	" <i>depressa</i>
Bumelia <i>tenax</i>	<i>Cratægus</i> <i>lucida</i> ?	" <i>hypericoides</i>
Bupthalamum <i>frutescens</i>	" <i>pyrifolia</i>	<i>Fagus</i> <i>sylvaticus</i>
Cacalia <i>atriplicifolia</i> ?	" <i>parvifolia</i> ?	<i>Fragaria</i> <i>virginiana</i>
Cactus <i>opuntia</i>	<i>Crotalaria</i> <i>ovalis</i>	<i>Fraxinus</i> <i>acuminatus</i> , &c.
" <i>pes corvi</i>	" <i>sagittalis</i>	<i>Galactia</i> <i>elliotti</i>
Callicarpa <i>americana</i>	<i>Croton</i> <i>argyranthemum</i>	" <i>glabella</i>
Calopogon <i>pulchellus</i>	" <i>glandulosum</i>	<i>Galardia</i> <i>bicolor</i>
Campanula <i>amplexicaulis</i>	<i>Cupressus</i> <i>disticha</i>	<i>Galium</i> <i>hispidulum</i>
Canna <i>flaccida</i>	<i>Cuscuta</i> <i>americana</i>	<i>Gaura</i> <i>angustifolia</i>
Caprifolium <i>sempervirens</i>	<i>Cyrilla</i> <i>racemiflora</i>	<i>Gelsemium</i> <i>sempervirens</i>
Cardamine <i>pennsylvanica</i>	<i>Cyperus</i> <i>flavescens</i>	<i>Gentiana</i> <i>catesbæi</i>
Cardiospermum <i>halicababum</i>	" <i>hydra</i>	" <i>ochroleuca</i>
Carex <i>glaucescens</i> , &c.	" <i>mariscoides</i> ?	<i>Geranium</i> <i>carolinianum</i>
Carya <i>aquatica</i> ?	" <i>tenuiflorus</i>	<i>Gerardia</i> <i>fasciculata</i>
" <i>tomentosa</i> ?	" <i>virens</i> , &c. &c.	" <i>filifolia</i>
Cassia <i>marylandica</i>	<i>Datura</i> <i>stramonium</i>	" <i>linifolia</i>
" <i>chamaechrysa</i>	<i>Decodon</i> <i>verticillatum</i>	" <i>pedicularia</i>
" <i>nictitans</i>	<i>Decumaria</i> <i>sarmentosa</i>	" <i>purpurea</i>
Castanea <i>nana</i>	<i>Dichromena</i> <i>leucocephala</i>	" <i>quercifolia</i>
" <i>pumila</i>	<i>Digitaria</i> <i>dactylon</i>	<i>Gleditsia</i> <i>monosperma</i>
Catalpa <i>cordifolia</i>	" <i>sanguinalis</i>	" <i>triacanthos</i>
Cranothus <i>americanus</i>	<i>Diodia</i> <i>hirsuta</i>	<i>Glycine</i> <i>erecta</i>
" <i>microphyllus</i>	" <i>tetragona</i>	" <i>mollissima</i> , &c.
Centaurella <i>verna</i>	" <i>virginica</i>	<i>Gnaphalium</i> <i>polyccephalum</i>
Cephalanthus <i>occidentalis</i>	<i>Diospyros</i> <i>virginiana</i>	" <i>purpureum</i> , &c.
Cerastium <i>hirsutum</i>	<i>Dracocephalum</i> <i>obovatum</i> ?	<i>Gonolobus</i> <i>macrophyllus</i> ?
Cercis <i>canadensis</i>	" <i>variegatum</i>	" <i>prostratus</i>
Chamaerops <i>hystrix</i>	<i>Drosera</i> <i>rotundifolia</i>	<i>Gordonia</i> <i>lasianthus</i>
" <i>palmetto</i>	<i>Eclipta</i> <i>erecta</i>	" <i>pubescens</i>
Chaptalia <i>integrifolia</i>	" <i>procumbens</i>	<i>Gratiola</i> <i>pilosa</i>
Cacnopus <i>anthelminthicum</i>	<i>Elephantopus</i> <i>caroliniensis</i>	" <i>tetragona</i>
	" <i>nudicaulis</i>	" <i>virginica</i>
	<i>Eleusine</i> <i>cruciata</i>	<i>Gymnstyle</i> <i>stolonifera</i>

<i>Hamamelis virginica</i>	<i>Juncus effusus</i> ?	† <i>Manisuris granularis</i> ?
<i>Hedyotis glomerata</i>	" <i>cchinatus</i> , &c.	<i>Mariscus cylendricos</i>
<i>Hedysarum canadense</i>	<i>Juniperus virginiana</i>	" <i>retrofractus</i>
" <i>glabellum</i> ?	<i>Jussieuia grandiflora</i>	<i>Marrubium vulgare</i>
" <i>nudiflorum</i>	<i>Justicia humilis</i>	<i>Marshallia angustifolia</i>
" <i>rotundifolium</i>	<i>Kalmia hirsuta</i>	<i>Melanthera hastata</i>
" <i>strictum</i>	<i>Krigia caroliniana</i>	<i>Micranthemum orbiculatum</i>
<i>Helenium autumnale</i>	<i>Lachnanthes tinctoria</i>	<i>Mikania scandens</i> ?
<i>Helianthemum carolinianum</i>	<i>Lactuca elongata</i> ? &c.	<i>Mitchella repens</i>
<i>Helianthus angustifolius</i>	<i>Lamium amplexicaule</i>	<i>Mollurget verticillata</i>
" <i>scaberrimus</i> ? &c.	<i>Laurus carolinensis</i>	<i>Monarda punctata</i>
<i>Helonias erythrosperma</i>	" <i>geniculatus</i>	<i>Minocera aromatica</i>
<i>Herpestis acuminata</i>	" <i>sassafras</i>	<i>Monotropa uniflora</i>
" <i>cuneifolia</i>	<i>Lechea minor</i>	<i>Morus rubra</i>
" <i>rotundifolia</i>	" <i>villosa</i>	<i>Mylocarium ligustrinum</i>
<i>Hibiscus moscheutos</i>	<i>Leersia oryzoides</i> ?	<i>Myrica cerifera</i>
" <i>scaber</i>	" <i>virginica</i>	" <i>caroliniensis</i> ?
" <i>virginicus</i>	<i>Lepidium virginicum</i>	<i>Nelumbium luteum</i>
<i>Hieracium gronovii</i>	<i>Lespedeza frutescens</i>	<i>Neottia tortilis</i>
<i>Hoepa tinctoria</i>	" <i>stuvei</i>	<i>Nuphar advena</i>
<i>Houstonia cerulea</i>	" <i>violacea</i> ? &c.	<i>Nymphaea odorata</i>
" <i>rotundifolia</i>	<i>Liatris gracilis</i>	<i>Nyssa capitata</i>
<i>Hydrocharis spongiosa</i>	" <i>graminifolia</i>	" <i>multiflora</i>
<i>Hydrocotyle umbellata</i>	" <i>odoratissima</i>	" <i>uniflora</i>
" <i>repanda</i>	" <i>secunda</i>	<i>Oenothera biennis</i>
" <i>vulgaris</i>	" <i>scariosa</i>	" <i>hybrida</i> ?
<i>Hydrolea quadrivalvis</i>	" <i>spicata</i> , &c.	" <i>pumila</i>
<i>Hypericum angulosum</i>	<i>Lilium catesboci</i>	" <i>sinuata</i>
" <i>fasciculatum</i> ?	" <i>coruscum</i> *	<i>Olea Americana</i>
" <i>nudiflorum</i>	<i>Lindernia dilatata</i>	<i>Onosmodium hispidum</i>
" <i>parviflorum</i>	<i>Linum virginianum</i>	<i>Ophiorrhyza mitreola</i>
" <i>rosmarinifolium</i>	<i>Liquidambar styraciflua</i>	" <i>lanceolata</i>
" <i>simplex</i> , &c.	<i>Liriodendron tulipifera</i>	<i>Oplotecha floridana</i>
<i>Hypoxis erecta</i>	<i>Lobelia amoena</i>	<i>Orchis blephariglottis</i>
<i>Hyptis capitata</i>	" <i>cardinalis</i>	" <i>ciliaris</i>
<i>Ilex cassena</i>	" <i>glandulosa</i>	" <i>nivea</i> , &c.
" <i>myrtifolia</i>	" <i>puberula</i>	<i>Orobancha virginiana</i>
" <i>opaca</i>	<i>Ludwigia capitata</i>	<i>Oxalis stricta</i>
" <i>prinoides</i>	" <i>cylindrica</i>	" <i>violacea</i> ?
<i>Indigofera caroliniana</i>	" <i>dicurrans</i>	<i>Pancratium mexicanum</i>
<i>Ipomoea nil</i>	" <i>linearis</i>	" <i>maritimum</i> ?
" <i>trichocarpa</i>	" <i>mollis</i>	<i>Panicum anceps</i>
<i>Iris hexagona</i>	" <i>pilosa</i>	" <i>crus galli</i>
" <i>verna</i>	" <i>virgata</i>	" <i>geniculatum</i>
" <i>vesicolor</i>	<i>Lupinus perennis</i>	" <i>hians</i> ?
<i>Itea virginica</i>	" <i>villosus</i>	" <i>italicum</i>
<i>Iva frutescens</i>	<i>Lycopus angustifolius</i>	" <i>lanuginosum</i> ?
<i>Jatropha stimulosa</i>	<i>Lycopus virginicus</i>	" <i>latifolium</i>
<i>Juglans nigra</i>	<i>Lythrum lanceolatum</i>	" <i>virgatum</i>
<i>Juncus acutus</i>	" <i>lineare</i>	" <i>viscidum</i> , &c.
" <i>acuminatus</i> ?	<i>Magnolia glauca</i>	" <i>† species an nova</i> ?
" <i>aristatus</i>	" <i>grandiflora</i>	<i>Paspalum dasyphyllum</i>
	<i>Malva caroliniana</i>	

† I am very doubtful whether the plant referred to, under this name is the plant described by Mr. Elliott. If it is not, however, I think I can safely say, that it has not been described by him at all.

‡ The following is a description of this remarkable plant:—

P. Stem procumbent 1–2 feet long, glabrous, geniculate, pubescent at the joints, compressed, striate leaves 6 to 8 inches long, 2 to 4 lines wide, slightly pubescent above, glabrous beneath, a little scabrous at the edges, expanding horizontally, linear lanceolate, tapering to a point, beautifully marked by purple bands, which fade by age.—Panicle composed of alternate spikes, expanding. Spikes compound with spikelets, 2 to 3 flowered,

<i>Paspalum distichum</i>	<i>Prunus chicensis</i>	<i>Sebbatia corymbosa</i>
" <i>floridanum</i>	" <i>umbellata</i>	" <i>gracilis</i>
" <i>laeve</i>	" <i>virginiana</i>	" <i>paniculata</i>
" <i>purpurascens</i>	<i>Psoralea canescens</i>	<i>Sagittaria lancifolia</i>
<i>Passiflora incarnata</i>	" <i>melilotoides</i>	" <i>graminea?</i>
" <i>lutea</i>	<i>Ptelea trifoliata</i>	<i>Salicornia herbacea</i>
<i>Pedicularis canadensis</i>	<i>Pterocaulon pycnostachyum</i>	<i>Salix nigra</i>
<i>Pentstemon levigatus</i>		<i>Salvia azurea</i>
<i>Petalostemum corymbosum</i>	<i>Pychnanthemum incanum</i>	" <i>lyrata</i>
<i>Phlox carolina</i>	<i>Pyrus angustifolius</i>	<i>Sambucus canadensis</i>
" <i>nitida</i>	<i>Quercus alba</i>	<i>Samolus valerandi</i>
" <i>pilosa</i>	" <i>aquatica</i>	<i>Sanguinaria canadensis</i>
<i>Physalis lanceolata</i>	" <i>catesbeii</i>	<i>Sanicula marylandica</i>
" <i>viscosa?</i>	" <i>chinquapin</i>	<i>Sarracenia variolaris</i>
<i>Phytolacca decandra</i>	" <i>cinerea</i>	<i>Saururus cernuus</i>
<i>Phackneya pubescens</i>	" <i>falcata</i>	<i>Schoenus effusus</i>
<i>Pinguicula elatior</i>	" <i>laurifolia</i>	<i>Schrankia uncinata</i>
" <i>lutea</i>	" <i>lyrata</i>	<i>Schwalbea americana</i>
" <i>pumila</i>	" <i>nigra</i>	<i>Scirpus autumnalis</i>
<i>Pinus palustris</i>	" <i>obtusiloba</i>	" <i>capillaceus</i>
" <i>inops?</i>	" <i>phellos</i>	" <i>capitatus, &c. &c.</i>
" <i>tæda</i>	" <i>pumila</i>	<i>Scleria obliquantha, &c.</i>
<i>Planera aquatica</i>	" <i>pinus</i>	" <i>reticulata</i>
<i>Plantago interrupta</i>	" <i>rubra</i>	<i>Scutellaria integrifolia</i>
" <i>virginia</i>	" <i>sempervirens</i>	" <i>ovalifolia</i>
<i>Platanus occidentalis</i>	<i>Ranunculus oblongifolius?</i>	<i>Senecio tomentosus</i>
<i>Poa annua</i>	" <i>pusillus</i>	" <i>lobatus</i>
" <i>eragrostis</i>	<i>Rhamnus carolinianus</i>	<i>Seymeria tenuifolia</i>
" <i>quinquefida</i>	<i>Rhexia ciliosa</i>	<i>Sicyos angulata</i>
" <i>refracta, &c.</i>	" <i>glabella</i>	<i>Sida græalis</i>
<i>Podostigma pubescens</i>	" <i>lutea</i>	" <i>rhombifolia, &c.</i>
" <i>virides</i>	" <i>mariana</i>	<i>Siegesbeckia laciniata</i>
<i>Pogonia divaricata</i>	" <i>virginica</i>	<i>Silphium compositum</i>
<i>Polygala corymbosa</i>	<i>Rhus copallina</i>	" <i>pennatifidum</i>
" <i>cruciata</i>	" <i>radicans</i>	<i>Sisyrinchium anceps</i>
" <i>lutea</i>	" <i>toxicodendron</i>	<i>Sium teretifolium</i>
" <i>polygama*</i>	" <i>vernix</i>	<i>Smilax laurifolia</i>
" <i>pubescens</i>	<i>Rhynchospora cymosa</i>	" <i>pseudo-china</i>
" <i>purpurea</i>	" <i>longirostris?</i>	" <i>tamnoides</i>
" <i>ramosa</i>	<i>Rosa lucida</i>	<i>Solanum carolinense</i>
" <i>setacea</i>	" <i>levigata</i>	" <i>nigrum</i>
<i>Polygonum punctatum?</i>	<i>Rubus trivialis</i>	<i>Solidago pyramidata</i>
" <i>sagittatum</i>	" <i>villosus</i>	" <i>retroscia</i>
" <i>scandens</i>	<i>Rudbeckia hirta</i>	" <i>tortifolia</i>
<i>Polypremum punctatum?</i>	" <i>levigata</i>	" <i>tenuifolia</i>
<i>Pontederia cordata</i>	" <i>mollis</i>	" <i>villosa</i>
" <i>lancifolia</i>	<i>Ruellia oblongifolia</i>	" <i>virgata, &c. &c.</i>
<i>Portulacca oleracea</i>	" <i>strepens</i>	<i>Sonchus carolinianus?</i>
" <i>species an nova</i>	" <i>tubiflora</i>	<i>Sparganium americanum</i>
<i>Potamogeton heterophyllum</i>	<i>Rumex acetosella</i>	<i>Spartina glabra</i>
	" <i>crispus, &c.</i>	" <i>juncea</i>
<i>Prenanthes virgata</i>	<i>Sabal pumila</i>	" <i>polyetachya</i>
<i>Prinos ambiguus</i>	<i>Sabbatia angularis</i>	<i>Spergula arvensis</i>
" <i>glabra</i>	" <i>calycosa</i>	<i>Spermocoe diodina</i>
<i>Prunella vulgaris</i>	" <i>chloroides</i>	<i>Spigelia marylandica</i>

spikelets on one side of the Rachis, appearing to be in 3 or 4 rows. Calyx, 2 flowered hermaphrodite and neuter, accessory valve mucronate, all 3 to 5 nerved; nerves green, pubescent, the upper valves purple, stigmas purple. Common in low grounds, flowers in July and August.—(*An gibbum of Elliott.*)

* This plant I have now growing. It is very similar to the *pilosa* in the stem and leaves, but differs entirely in its flowers, which are white and very minute.

<i>Stachys aspera</i>	<i>Tragia urens</i>	<i>Vernonia oligophylla</i>
<i>Steuartia virginica</i>	<i>Trichostema dichotema</i>	" <i>scaberrima</i>
<i>Stillingia legastrina</i>	<i>Trichodium laxiflorum</i>	<i>Veronica arvensis</i>
" <i>sebifera</i>	<i>Trifolium repens, &c.</i>	" <i>peregrina</i>
" <i>sylvatica</i>	<i>Tricophorum cyperinum</i>	<i>Viburnum nudum</i>
<i>Stipa avenacea</i>	<i>Tripsacum monostachyon</i>	" <i>prunifolium?</i>
<i>Stylosanthes elatior</i>	<i>Typha latifolia</i>	<i>Viola cucullata</i>
<i>Styrax grandiflorum</i>	<i>Ulmus alata</i>	" <i>palmata</i>
" <i>lave</i>	" <i>americana</i>	" <i>pedata</i>
" <i>pulverulentum</i>	<i>Urtica capitata</i>	" <i>primulifolia</i>
<i>Tephrosia paucifolia</i>	<i>Utricularia inflata</i>	<i>Viscum verticillatum</i>
" <i>virginiana</i>	" <i>purpurea?</i>	<i>Vitis rotundifolia</i>
<i>Tetragonotheca helianthoides</i>	" <i>setacea</i>	" <i>æstivalis</i>
<i>Teucrium canadense</i>	<i>Vaccinium arboreum</i>	" <i>cordifolia?</i>
" <i>virginicum</i>	" <i>corymbosum</i>	<i>Xanthium-strumarium</i>
<i>Thalia dealbata</i>	" <i>dumosum</i>	<i>Xyris flexuosa</i>
<i>Thyrasanthus frutescens</i>	" <i>frondosum</i>	<i>Yucca filamentosa</i>
<i>Tillandsia bartramii</i>	" <i>myrsinites?</i>	" <i>gloriosa</i>
" <i>usneoides</i>	" <i>stamineum</i>	<i>Zanthoxylon tricarpum</i>
<i>Tipularia discolor</i>	<i>Verbascum thapsus</i>	<i>Zapania nodiflora</i>
<i>Tofieldia pubescens</i>	<i>Verbena urticifolia</i>	<i>Zizania milicæa</i>
<i>Tradescantia virginica</i>	<i>Verbesina sinuata</i>	" <i>palustris</i>
" <i>rosea</i>	<i>Vernonia altissima</i>	<i>Zizyphus volubilis.</i>
	" <i>noveboracensis</i>	

NOTE C. In order to give some idea of the health of the county, soon after its first settlement, I add the following table, which has been prepared by Mr. J. B. Mallard, from the records of Midway Church.—(Vide his account already cited, p. 20.)

Year.	Births.	Deaths.	Year.	Births.	Deaths.	Year.	Births.	Deaths.
1754	4	2	1771	15	8	1788	9	25
1755	6	2	1772	21	14	1789	11	17
1756	14	3	1773	18	24	1790	21	25
1757	14	2	1774	11	16	1791	12	34
1758	11	6	1775	7	11	1792	3	30
1759	20	5	1776	17	10	1793	26	19
1760	16	1	1777	15	15	1794	17	11
1761	13	6	1778	20	8	1795	21	18
1762	13	4	1779	..	..	1796	17	8
1763	14	4	1780	..	..	1797	22	14
1764	15	5	1781	..	..	1798	26	22
1765	2	8	1782	6	..	1799	16	17
1766	6	19	1783	5	3	1800	20	20
1767	4	21	1784	6	5	1801	18	37
1768	6	12	1785	6	17	1802	11	20
1769	10	15	1786	15	8	1803	22	22
1770	1	10	1787	4	8	47	600	621

I would remark that this table includes the deaths, from casualties, as well as from disease; but of course those from the former, are comparatively few.

NOTE D. The following quotations from the *Problems* of Aristotle, will show that he also regarded wet and rainy seasons as productive of diseases:

"1. What is the reason that, if a rainy and moist spring follow upon a cold

winter, the succeeding summer becomes sickly, fevers and inflammation of the eyes prevailing?

"2. What is the reason that, if a dry and cold spring follow upon a moist and rainy winter, both spring and summer become sickly?

"3. What is the reason that, if upon a dry and cold summer a rainy and moist autumn follow, headaches are frequent during the succeeding winter, and hoarseness and coughs, terminating in consumption?

"4. What is the reason that, if, after a cold winter, and a rainy and moist spring, the summer be very dry, autumn becomes most especially fatal to little children, whilst among the rest of mankind, dysentery and quartan ague are of frequent occurrence?

"5. What is the reason that, after a rainy and moist summer and autumn, a sickly winter follows?

"6. What is the reason that, if, in consequence of the heat of the sun, evaporations rise from the ground in large quantities, the year becomes pestilential?

"7. What is the reason that those years are always sickly, when the small frogs are very numerous?"

It were perhaps well, if, like Aristotle, we paid more attention to climatic influences in the ætiology of disease, and less to the *undefined and undefinable malaria or miasmata arising from the decomposition of vegetable substances!!*

The following extracts will shew his opinion, also, in regard to the relative or comparative influence of *seasons*:

"1. What is the reason that, although men are more afflicted with diseases during summer, the sick die in larger numbers during winter?

"2. What is the reason that spring and autumn are sickly? Is it because changes produce diseases?—Autumn is more sickly than spring.

"3. What is the reason that, in winter there are less diseases than in summer, but that they are more fatal in the former season?

"4. What is the reason that burning fevers most frequently occur in autumn and winter, i. e. during the cold seasons; and chills in summer, when the weather is hot?"

ARTICLE II.

Cimicifuga in Nervous Diseases. By H. V. WOOTEN, M. D., of Lowndesboro', Ala.

Of all the diseases which the medical practitioner is called upon to treat, none are so puzzling to his skill, or exhausting to his patience, as those usually denominated nervous: their pathology is less understood—their therapeutics is less reliable, and consequently, their treatment is more empirical and less satisfactory, than that of any other class of diseases. Under these circumstances, it is not surprising that any new remedy, that is respectably recommended, or even suggested, for any of these diseases, should be so readily tested by the physician.

In 1839, Dr. Young, of Pennsylvania, (*Am. Jour.*, Nov.) reported a few cases of chorea, which he cured by the use of the *cimicifuga*, and suggested its use in other nervous affections, as epilepsy, &c. Not long after I read his paper, I was called upon to treat a case of epilepsy, and from the embarrassment and failure which I had usually met with, in the use of other remedies, I determined to give the *cimicifuga* a trial. My success in the case induced me to employ the remedy in other cases—all of which I will give.

CASE 1st. A girl, of delicate constitution, aged 11 years: had been subject to the "fits" for six months, at irregular intervals, at first about once in two weeks, but of late more frequently. The fits were not long, but violent, and usually left the patient in a complete stupor for a few hours. Her general health was pretty good, but of late the intellect had been growing obtuse and irregular. Purgatives, indigo, blisters, assafoetida, and all the usual routine of remedies had been used in the case, without effect. I gave a purge of calomel and aloes, which acted thoroughly. I then prescribed the pulverized *cimicifuga* in doses of ʒss., to be given morning, noon and night; and the purgative of calomel and aloes to be repeated twice a week. During the first two weeks of the treatment, she had two fits, but stated that her feelings were much better, and the obtuseness of intellect had disappeared. The treatment was continued, increasing the dose of the powder to ʒii., and giving the purgative once a week for six weeks longer, during which time she had no fit; her general health and strength appeared much improved. One year afterwards, she had had no return of the disease. Since that time I have known nothing of the case.

CASE 2nd. The mother of the girl above mentioned, aged about 40, of slender frame, but good general health, had been subject to epileptic fits for about eight years; at first occurring about once a month, but for the last three years oftener, if the patient was fatigued or in any way excited unusually. I put her under a similar course of treatment to that of case 1st. For four weeks she had but one fit, and it was a light one; but she continued the remedy until it seemed to lose its power on her system, and she was not cured. She discontinued the medicine, and I know not what became of the case.

CASE 3rd. A girl, aged 13, of good health and full habit of body, was seen to fall from a height of a few feet, and was picked up in a stupor, with her extremities spasmed. The symptoms were attributed to an injury supposed to have been received in the fall; but

none could be discovered, though the head was shaved, and well examined. She was bled freely; cold applied to the head, and blisters along the spine. The fits ceased, but returned again in about a week, and continued to recur about once a week for three months; at the end of which time I first saw her. Of late her paroxysms had become more violent and exhausting, and were preceded by a fit of mania, during which she would scream violently, and endeavor to destroy every thing in her way. This would last about fifteen minutes, and would end in a stupor, which would last about the same length of time, when the epileptic fit would ensue. During the intervals, her intellect appeared tolerably good, and I could discover no particular disease or organic disorder about her, except of the nervous system. When she would attempt to stand erect and still, she exhibited a restless eye, and a slight tremor of the extremities. I was accidentally present when one of her paroxysms occurred, on which the history of the case was given me, with a request for a prescription. It occurred to me that the fall was more likely the *effect* than the *cause* of the fits, and as no physician was in attendance on the case, nor had been for several weeks, I gave a prescription founded on that view of the case. Her general appearance was good; muscular and vascular systems sufficiently full and active; pulse 100. I bled her $\frac{3}{4}$ ii., gave a purgative of calomel and aloes, and continued the same prescription as case 1st. She had but two paroxysms, about five days apart, after she commenced the use of the remedies, and they were light, and without the antecedent mania. She had, when I first prescribed for her, a long blister on the dorsal spine. The course was steadily pursued for six weeks, when the patient appeared well, and the medicine was discontinued. She remains well to this time—three years. It may be proper to state, that neither this patient, nor case 1st, had menstruated before they came under my treatment, nor had they done so when it ceased.

CASE 4th. A child, aged 4 years, was seized with "fits," which occurred once every day, at irregular hours, for three days. The symptoms were attributed to worms, and the child was drenched with the usual amount of "worm physic." The fits ceased, but returned in four days, and continued to recur about twice a week, for three weeks, when I saw it. It was pale, somewhat emaciated; appetite good, but digestion much impaired; abdomen tumid, &c.

I gave x. grs. blue mass, with ii. grs. Dover powder, which seemed

to act well upon the intestinal secretions. I then proscribed the cimicifuga in the following form :

Cimicifuga, powd. ℥iss.

Water, Oiss.

Boil to Oi.—strain, and add loaf sugar ℥iss. Of this, give ℥i. three times a day.

This was continued three weeks,—the child had no more “fits,” and its general health became very good.

Of the above cases, three at least were epilepsy ; three of them were cured, and one scarcely benefitted. So far as these cases go to establish the character of the cimicifuga as a remedy in this disease, it would appear that it is not to be relied on in cases of several years’ standing ; but that in recent cases, it is a valuable remedy, and worthy of diligent trial.

I could not say, positively, that the 4th case was epilepsy, as I did not have an opportunity of seeing a paroxysm ; but from the account given me of it, I felt convinced that it was truly epileptic in its character.

The account which I have given of the above cases, is not so *minute* and *full* as I would wish it to be ; but every physician acquainted with practice in the country, over a scope of many miles, will understand the reason, why it is necessarily as it is.

The cimicifuga seems to act as a tonic to the general system ; but its peculiar and most valued effects are displayed particularly on the nervous system. To this system it imparts permanency of tone, and equanimity of action. I have used it in several cases of delicate females, whose nervous action was much disordered, producing hysteria, and its kindred disorders. I have also used it with great benefit, in cases of dry, hacking cough, occurring in persons of weak habit, and disordered nervous power, with neuralgic pains about the chest. I have, myself, been astonished at its effects in restoring the vigor and healthful action of the system in such cases.

I could detail such, but it is perhaps unnecessary. I will only remark, further, that in using the cimicifuga, it is altogether important, though often difficult, to get that which is good and pure.

ARTICLE III.

A Case of probable Extra-Uterine Pregnancy.

The interest at present existing in the profession on the subject of Extra-uterine Pregnancy, has induced us to solicit and to place on record, the following facts.—EDTS.

OXFORD, Ga., March, 1845.

Dr. JOSEPH A. EVE, *Prof. of Obstetrics, &c.* :

Dear Sir—Your views are desired in relation to an interesting case connected with the branch of the profession to which your attention has been particularly directed, for some years. Early in March of last year, I was called to a negro woman, belonging to Mr. Worrill, of this place, who complained of pain and tenderness in the hypogastric and iliac regions of the right side: upon examination, I found the parietes of the abdomen for a circumscribed space indurated, as if covering a schirrous tumour as large as an orange, the hardness, or apparent hardness of the skin was peculiar; and the tumour, which appeared intimately connected with the skin, was distinctly perceptible in the iliac region.

I bled, blistered and gave gentle purgatives, for the subduction of inflammation, with decided benefit to the patient; the pain and febrile symptoms subsided, and she was able in a short time to go about; the hardness, however, and likewise the tenderness or pressure continued. The enlargement of the tumour progressed gradually, and the woman supposed herself pregnant. She is about forty years of age, and her youngest child about eighteen years old.

She remained in feeble health, often in bed, until September, when her strength gave way and she was again prostrated. I found her apparently in labour, her pains, however, short and ineffectual; upon examination per vaginam I was satisfied that the uterus did not contain the fœtus; after some twenty-four hours unavailing efforts to bring forth, her pains subsided, lactation supervened, but the abdominal enlargement remained unchanged. She was soon again able to attend to business, and has continued about ever since, with occasional short intervals. Within the last two months the catamenial discharge has returned which was before interrupted. At my request,

my friend, Dr. Gaither, visited her with me a few days ago. The size of the tumour is about that of the gravid uterus at six months; it extends up to the epigastrium, and has inequalities to the touch which very closely resemble the prominent points of a foetus;—it seems to occupy the centre of the abdomen, not being confined to either side, and has neither increased nor diminished for several months. The woman's general health is tolerably good. She is a valuable servant, and her owners feel great solicitude on her account, not knowing what may be the final result. I am deeply concerned as to the issue, and should be thankful for your opinion with respect to its nature, and the most advisable course to be pursued. I am inclined to view it as a case of extra-uterine pregnancy, but do not feel certain whether it may not be ovarian schirrous or dropsy, as some of the earlier symptoms seemed to indicate: in either case, would you advise an operation?

Your views at length, as I have said, will be thankfully received, and highly appreciated.

Very respectfully, yours,

GEORGE G. SMITH.

AUGUSTA, March 27th, 1845.

Dear Sir—Your very interesting letter of the 19th instant, should have received an immediate reply, had not the pressure of business and previous engagements, absolutely prevented me.

After the most attentive and careful perusal, I cannot arrive at any other conclusion than that to which you have come, that it is a case of extra-uterine pregnancy.

With respect to the peculiar hardness of the skin over the tumour, I cannot account for it, but do not suppose that it is connected with or depend on the tumour within.

My opinion is most decidedly against undertaking an operation unless indicated by nature herself, or as it were in co-operation with nature. When she manifests an endeavor to make a way for the foetus to escape, by instituting the process of ulceration, the surgeon I think may, with propriety, and often with advantage, anticipate the more tardy course of spontaneous ulceration, by making an opening in advance or enlarging that which may have been commenced, through which to extract the foetus and secundines.

But when nature is quiescent, I am decidedly of opinion that surgery should not interfere.

Time has permitted me to refer only to a very few of the most recent authorities.

M. Chailly remarks—"The danger of the operation is far greater than in the gastrotomy practiced in cases of normal pregnancy. The placenta does not separate of itself from the internal surface of the cyst; it adheres so intimately to it that it seems to be an integral part of it: its extraction is therefore very difficult and dangerous."

"Again, how can we decide to perform this operation when we know that the unhappy woman, if she should not die immediately, will undoubtedly sink gradually, and in the midst too of the most excruciating sufferings."

"In a word, it is my opinion, that if the labour cannot be quieted by opium, the cyst being intact, nothing should justify an operation; and the objection, if possible, is still stronger, should the cyst be ruptured."

"Art cannot profitably interfere until the first phenomena have passed by, whether there has been rupture of the cyst or not, and there should be no haste; the cyst should be allowed time for a new formation, and this is a slow process, and then the operation is only to be attempted in order to prevent imminent danger, or to relieve the woman from habitual suffering which renders life a burden to her."

M. Moreau admits that very little assistance can be rendered, and that it would be worse than rash to attempt an operation before the rupture of the cyst, but he declared himself decidedly of opinion that, if called very soon after its rupture, gastrotomy ought to be performed; he thinks the danger of hæmorrhage has been exaggerated, and that it promises more for the safety of the mother as well as the child, than abandoning the case to the unaided resources of nature.

Of all the recent authors with whose writings I am familiar, M. Colombat expresses himself most decidedly in favor of an operation. After weighing the arguments and opinions of authors for and against it, he observes—"However it may be in regard to the different opinions we have just mentioned, we believe that the operation ought to be performed, even after the rupture of the cyst, and that in general we ought not to wait until the symptoms of peritonitis shall have declared themselves, because in that case we are almost sure to see the child and mother perish, when by operating earlier, we might perhaps have saved both."

Although I deemed that candor required I should give the opinions

of Moreau and Colombat, which militate somewhat against my own, I am decided in my opposition to an operation, except under the circumstances already stated, and feel myself satisfactorily sustained, not only by the authority of M. Chailly, but also by that of Dr. Churchill and Dr. Lee, whose views I will give you in their own words.

"If we find, after a time, that any effort is made to remove the fœtus, by the formation of an abscess or fistulous communication and discharge of fœtal bones, it may be advisable in some cases to assist the process by enlarging the opening in the abdominal, vaginal or rectal parietes, but this should be done with great judgment and care, as serious hæmorrhage may ensue, and we are never to forget that nature is generally competent to complete the process she commences."—*Churchill*.

"In the treatment of these cases, the best plan is to subdue the inflammation by leeches and other means, and when the bones approach the surface, to make an opening through the abdominal parietes, or to enlarge the natural opening of these, and extract the bones like any other foreign bodies lodged in the abdomen. Even if the diagnosis in these cases of ventral gestation were more perfect than it is, I do not think we would be justified in performing the operation of gastrotomy with the view of extracting the child alive."—*Lee*.

In addition to the many cases on record in which women have lived several years—some even twenty and thirty years—with an extra-uterine fœtus in the abdomen, Dr. Bacchetti, of Pisa, has recently related an extremely interesting case of a female who in 1836 manifested signs of pregnancy, and in the ninth month signs of true labour, which after recurring fifteen days successively, subsided entirely, the volume of the tumour continuing of the same size.

In 1838, and again in 1841, she became pregnant, and was happily delivered each time. Ten months after the last birth the tumour in the abdomen became painful, and she gradually sunk in 1842. On examination, post-mortem, a male fœtus was found entire with the exception of the bones of the cranium which were separated.

This is a truly interesting subject, and although pressed for time, I dislike to dismiss it. I would be happy to hear from you again, and learn the progress and termination of this case; in the mean time I do not think you can adopt any better course than that you have pursued to combat symptoms as they arise, and endeavor to improve and support her general health and strength.

With highest respect, your obedient servant,

JOSEPH A. EVE.

PART II.—REVIEWS AND EXTRACTS.

Extracts from an Official Report of J. J. B. WRIGHT, M. D., Surgeon U. S. Army, to the Surgeon-General U. S. Army, on the use of large doses of Sulphate of Quinine in Diseases of the South. Communicated by W. H. VAN BUREN, M. D. (From New-York Journal of Medicine.)

* * * Previous to April, 1841, I had never exhibited quinine in larger quantity than twenty-five grains, in twelve consecutive hours. I have a distinct recollection of the circumstances under which, with a trembling hand, and doubting hope, I gave the quinine for the first time to the extent specified. The patient was a lady of great worth to the community and her family, and the disease, which made its approach in the shape of remittent bilious fever, had lapsed into intermittent, assuming a malignancy of aspect which awakened apprehensions for the issue. I did not leave the bedside of my patient during the continuance of the last paroxysm, for it presented all the symptoms which indicate serious tendency to congestion; and I was persuaded that if another could not be prevented, she would not survive its termination. Under this impression, and having confidence in the medicine, (if it could be introduced in sufficient quantity without incurring the risk of injurious effects,) I resolved to disregard the rule under which I had hitherto acted, and to exhibit the quinine to an extent to be determined by its effect upon the system, given in divided doses. Commencing, therefore, as soon after the subsidence of the paroxysm as in my judgment was safe, I gave the lady four grains of sulphate of quinine every two hours, (increasing the last dose to five grains) until twenty five grains had been given—anxiously watching the effect of each dose. With a degree of satisfaction I have seldom felt under like circumstances, I witnessed the index of the clock pass the mark which had indicated the period of approach of the previous paroxysm—for I felt that my patient was safe. Her convalescence dated from that time.

Subsequently, whilst engaged in private practice, and for the first years of my service in the army, I acted under the rule comprised in the particulars of the case to which I have alluded.

In 1834, whilst on duty in Arkansas, I witnessed many cases of the malignant bilious fever of that country. The cases which came under my charge were treated in the usual way. Quinine entered into the list of remedies, but it was only exhibited *under the canon*, when an approach to intermission, or a distinct remission, was apparent. One case, however, occurs to me as an exception to what I have stated, which I will relate.

Lieutenant (now Captain) H. of the 7th Regiment of Infantry,

whilst on detached service in August or September, sustained an attack of remittent bilious fever, and with a large majority of his command in like condition, was brought into Fort Gibson. For several days the fever pursued a regular course, and a favorable crisis was hoped for. Suddenly, however, a total change succeeded. The paroxysm anticipated the usual hour of incursion, and was characterized by all the symptoms of grave congestive fever,—the brain being the principal seat of congestion. In one hour after the occurrence of the paroxysm, the sensorial functions were abolished, and very soon profound coma supervened; the extremities were cold as marble,—the pulse almost extinct,—the sphincters of the bladder and rectum utterly paralyzed,—the respiration labored and irregular,—the eyes upturned and injected;—in fine, the patient seemed in the agonies of death. All my sympathies being awakened for my friend, and all my anxieties for my patient, I hastened to the encounter; but I must confess with painful misgivings of my ability to contend successfully with the disease. Having at that time no precedent or authority for the exhibition of quinine in large doses under such circumstances, I gave it in divided quantities, in union with calomel and camphor, to the extent in all of twenty-five grains;—applied cold to the shorn head,—epispastics to the thighs, sinapisms to the legs and arms, and, if I mistake not, opened the temporal arteries, and applied cups to the neck. Under this treatment the patient gradually recovered, with the loss of his hearing—almost total for some time, and though ultimately greatly improved, audition is to this day somewhat defective.

In this case I confined the use of the quinine within the limit which my previous experience had taught me was safe, under dissimilar circumstances, and I shall never cease to award to it the credit of having saved to his friends, and to the service, a most worthy and meritorious officer.

If it be said that the favorable result in this case was due to the other remedies employed, and that quinine was not the efficient agent in accomplishing the cure, I can only say, in support of its claims, that I had never, *at that time*, witnessed recovery in a case apparently so utterly desperate, and that *since then*, I have only known a fatal issue averted when the quinine has been administered in large doses.

In 1840, I was assigned to the Florida army, and ordered on duty at Fort Heileman, Garey's Ferry. I arrived early in October, and succeeded to the charge of a full hospital. A majority of the cases (excluding those of intermittent fever), were bilious remittent with manifest tendency to irregular sanguineous determinations, and local congestions. Not yet having met with any notice of the modern practice with the quinine, and having as an example of the safety and advantage of its exhibition *during the paroxysm of fever*, only the solitary case of Captain H., I did not rely upon it as a principal agent, but confined its exhibition to the apyrexial period of congestive intermittent, and the period of remission, in the more continued

arms of fever. My late experience in the use of quinine has induced me to marvel at the over-caution with which I exhibited it on this occasion and formerly, and I can hardly repress a smile when I bring my mental vision the spectres which my imagination conjured up.

In November, 1840, I joined the 1st Regiment of Infantry, which had recently taken post at Sara-sota, on the western coast of Florida, in a position which combined in an eminent degree all the circumstances calculated to affect unfavorably the health of troops. During the winter, the command suffered, only as might have been anticipated, from its exposed situation, taking into consideration the fact that the regiment had been three years in the field, and deprived for the last few months at least, of a full supply of vegetable aliment. Intermittent fever prevailed to a considerable extent among the troops, and was interrupted, ordinarily, by the use of quinine in doses of five grains, repeated three times during the interval.

My largest experience in the use of quinine having occurred during my service with the 1st Infantry, and in the quarter ending June 30th, 1841, I beg leave to quote from my Report to the Surgeon-General's office, for that period. * * * * "That

the 1st Infantry has encountered disease since the last Quarterly Report, the present will abundantly testify. A strong scorbutic diathesis pervaded the command from the commencement of winter, which imparted to most of the forms of disease which occurred during that season some of the features of its own character. Dysentery, with tendency to total cachexia, and intermittent fever, constituted the bulk of the Sick Report. About the 1st of April, there occurred more cases of remittent fever than we were prepared to expect so early in the season, but surprise gave place almost to consternation, when, towards the close of the month, there were added to the sick list twenty cases *per diem* of congestive fever."

The post at Sara-sota was abandoned on the 2nd of May. The sick, to the number of two hundred, or more, were taken to Cedar Keys, and ultimately transferred to Cantonment Morgan, where, the Report goes on to state, "after considerable delay, and some hurtful exposure, we are very comfortable in hospital." * * * "The seat of congestion in this fever varied in different cases. In some the brain, in others the liver and spleen, and in some others the lungs, constituted the principal seat of engorgement, as was evidenced by the symptoms, and by autopsic examination in the fatal cases.

"Excessive prostration of physical power occurred simultaneously with the attack, and the mental functions sustained early impairment. The whole surface of the body, but particularly the extremities, became preternaturally cold after the first paroxysm, (in which, however, but a small degree of increased heat was developed). A cold, clammy, or limpid perspiration accompanied this condition of the skin. The tongue, at first pale, and indented, sometimes smooth and shining, became dry and hard; the teeth were encrusted with sordes; the pulse was frequent, irritable, and often intermittent; and the

alvine discharges watery, and sometimes bloody, with tenesmus. The whole surface of the body presented a shrunken and contracted appearance; the respiration was hurried and irregular; the patient, in fine, presented that indescribable picture of wretchedness peculiar to those forms of disease, in which the *lædientia* impress with such intensity as to overwhelm the vital energies, and prevent the development of *normal* reaction.

"The treatment need not be fully detailed.

"But though my observation during the progress of this fever, corresponds with all my previous experience in regard to the impotence (to say the least,) of the lancet as a remedy in advanced congestive fever, and will induce me to banish it from my list of curative means in such cases in all future time, I am happy in having been directed to a practice, of which, if I obeyed the impulse of my feelings, I should express myself in terms of extravagant commendation. I allude to the exhibition of sulphate of quinine in twenty, thirty, and even forty grain doses, alone, or in combination with calomel. I will content myself for the present with saying, that in numerous instances, it has seemed to rescue the subjects of this form of disease from the most impending danger." * * * * "It is due to Drs. Harvey and Randall, of the army, to admit that I entered on this practice at their urgent suggestion,—for I will confess that I entertained much misgiving of its safety. My doubts are now utterly dissipated, and I would give a half, or even a whole drachm of quinine, with as little hesitation as the old-fashioned 'ten and ten' of Dr. Rush."

Having no precise statistical record in my possession of the cases of congestive fever above alluded to, I can only state, in general terms, that the cases of disease to which I refer, in the Report, as exposed to the "most imminent danger," and to whom the quinine was administered in large doses, with advantage, could not have been less than fifty. I will further state that it was the *sulphate of quinine* that I prescribed, that it was obtained in every instance from the Army Medical Purveyor, and that in my opinion it was pure.

My subsequent experience with the article relates principally to its use in the remittent and intermittent fevers, which came under my notice in the summer and autumn of 1842, in Florida, a few cases only of congestive fever having presented themselves during this year. As a remedy in all these cases, the article fully sustained the favorable character it had previously established in my estimation.

I am not aware that I have discovered any disparity of effect in the action of the remedy determined by the different states of the system, in reference to its tonic or atonic condition. I have never exhibited it when there seemed to be present an inflammatory diathesis, (contra-distinguished from a febrile condition,) nor would my recent experience induce me to rely with confidence on the quinine, as a supporting agent, in a prostrate condition of the system, unless the prostration could be regarded as the effect of the febrile agency (malaria,) still in operation.

I have not witnessed injurious effects from the medicine in any case that I can call to memory, and the only unpleasant symptoms that I have observed to follow its use, were more or less buzzing in the ears, and, occasionally, slight dizziness. These symptoms have uniformly subsided with the paroxysm.

Modus Operandi of Quinine.—It is said that the cotemporaries of the Countess of Cinchon—the Friars who first published the fame, and disseminated the use of the Peruvian Bark as a remedy for intermittent fever,—regarded it as a *specific*, perhaps as an *antidote* to the poison of malaria; and modern observation seems to have furnished some reasons for doubting, if the speculations which have been indulged by their successors have led to any better conceptions of the *modus operandi* of its efficient principles. With the profession it is dangerous at the present day to talk of “*specifics*,” or even of *antidotes*, unless we are ready with a philosophical *rationale* of every step in the process by which the end is attained;—yet, however humiliating to the pride of science, we must admit that there are many things connected with the principles and practice of medicine that we do not comprehend. Individuals form theories, they indulge in elaborate and ingenious hypotheses, and admire the creations of their fancies—the fictions of their closet speculations, until they actually persuade themselves, and others too, that their conclusions are the result of legitimate deductions from ascertained facts,—that even the spirit of Lord Bacon himself presides over their deliberations and has affixed its seal to the truth of their philosophy. These systems are destined to last until some successful revolutionist in medicine saps their foundations, to erect on their ruins a superstructure no less comely to look upon, but awaiting, in after time, a similar fate; because speculations, and not facts, constituted their basis. Thus it has ever been since the dawn of medicine, and we apprehend its future historians will but record a succession of like events, until it shall have established for itself a place among the fixed and certain sciences.

We would not controvert the truth of the position that medicine has made great strides in the way of improvement, within the last century. On the contrary, we are proud to boast that every year has added to the resources of the art; for genuine inductive philosophy has infused its spirit into the investigations of many of its ardent cultivators. But there are many secrets yet undivulged in philosophy and therapeutics, and perhaps a precise and definite conception of the manner by which certain medicines effect a cure in diseased conditions of the system, will remain among the desiderata until medicine shall have received the last finishing touch from the hand of science.

We mean these remarks as prefatory to the expression of a doubt whether the bark or its proximate principles, arrest intermittent fever, and other forms of febrile disease dependent on miasmatic origin, by virtue of the tonic property inherent in them. We are not prepared

fully to deny that the medicine possesses tonic properties; it is an opinion sanctioned by the concurrent belief of the profession for more than a century. But my late experience authorizes and inclines me to believe that the remedy exercises over fevers of this genus a peculiar and specific control, independent of, and distinct from, any effect which it may be presumed to have upon the *tonicity* of the muscular fibre.

Some practitioners, whose experience in the use of this medicine has been by no means inconsiderable, have been led by observation of its effects, to class it among the *Sedantia*, and several plausible articles have been written in support of this view of its properties. It must be admitted that if I were reduced to the alternative of adopting one or the other of these opinions in regard to the character of the medicine, my late observations would incline me to entertain the latter—although some unexplained facts would still stare me in the face, and perplex my understanding.

They who contend that its curative agency is due to a direct effect on the tonicity of the muscular fibre, would proscribe its use in all cases where this vital property, or the contractibility of the muscular system, might be presumed to be in an exalted condition. But the physician experienced in diseases of southern climates will tell you that he is in the practice of administering it when the condition of these vital properties is, seemingly at least, above par. For instance, he exhibits the article at the very height of the paroxysm of the remittent fever of his climate, and finds as a result of its action, a reduction in the force and frequency of the pulse,—a diminution of animal heat,—a moist condition of the skin,—a subsidence of pain and restlessness; in fine, a sudden conversion from febrile disturbance to fair convalescence. Now, if the experience and observation are right, can the theory be otherwise than wrong? On the other hand, those who maintain that the remedy acts by sedation, do not hesitate to exhibit the article when the powers of life are depressed to the utmost limit compatible with existence; and they aver that its agency is curative under these circumstances. True it is that the writer has himself frequently given the quinine in both of the conditions stated, and in both his experience teaches that advantage resulted from the practice. He has witnessed a decided improvement to follow the exhibition of ℥ij. of quinine, repeated in two hours, in advanced congestive fever, when the condition of the case was characterized by a lethargic state of the sensorial functions, verging on coma,—cold extremities,—cool surface, bathed in limpid perspiration,—dry and pallid tongue,—feeble and fluttering pulse, &c. And again, whilst on duty in Florida, in the summer of 1842, in charge of the General Hospital, it was his usual custom, after attentive observation of the safety of the plan, to exhibit twenty grains of quinine at any period of the paroxysm of the remittent fever of that country, and he is safe in declaring that the practice was successful—as the Quarterly Report to the Surgeon-General's Office will

testify, not a single death from remittent fever having been reported during the season, nor from its sequelæ.

In southern climates, where high atmospheric temperature prevails, the system, it is well known, becomes languid and relaxed. This condition is the effect, no doubt, of the exhausting influence of the prolonged action of caloric. Indirect *debility* is induced, and with this loss of tone in the system, its *irritability* is exalted. Excessive mobility is impressed on the whole apparatus of life. The pulse is quickened, morbid sensibilities and new susceptibilities, mental and physical, are awakened, and hence do the "children of the sun" become distinguished for all that relates to temperament and disposition—all that constitutes peculiarity of sectional character, from their cool, calculating, deliberate brethren of the North.

But if this is true in regard to the system in health, it is no less so when it is under the influence of morbid agents; and it might, with some show of plausibility, be maintained that, in this condition, *tonics* operate indirectly by *sedation*,—quieting excitement by imparting tone. And thus, perhaps, would they who entertain this view of the medicinal properties of the quinine reconcile their notions of it with its effects, as illustrated in the cases of fever in which it has been given with advantage in the *pyrexial* period.

It is said that recent observations in other countries have demonstrated the advantage of quinine in acute inflammations, rheumatism, and other forms of disease in which stimulant tonics are, confessedly, not only inappropriate, but manifestly pernicious. We have the testimony of such men as Morton, Fothergill and Haygarth, of the last age, in favor of Peruvian bark in inflammatory rheumatism; and the present professor of midwifery in the University College, London (Dr. Davis), furnishes unequivocal evidence of the paramount advantage of the remedy in such cases. (London Lancet, February, 1841.) The writer has no experience of its effects, when exhibited in such conditions of the system, but if time should verify its claim to confidence in these diseases, it will but furnish another argument in support of the position assumed, that its medicinal properties are not fully comprehended or established.

There are strong reasons for believing that the antimonial medicines possess direct febrifuge virtues, independent of any influence they exert over the heart and arteries by their mere nauseating effect upon the stomach.

The action of mercury in the cure of lues venerea, has never been explained in a way that can seem satisfactory to those who profess to exhibit no article of medicine, the precise physiological effect of which they do not understand. To designate a whole class of remedies as "alteratives," is but to admit that they produce their effects in some occult way which we do not comprehend,—in fact, I might go on to enumerate almost one-half of what is contained in the *armentarium* of physic, and include the whole in this category,—but I will conclude what I have to say in regard to the *modus operandi*

of quinine in the fevers of malarial regions, and write myself the advocate of the notion entertained by the Jesuits, to-wit: its agency is *specific*.

It is thought that this article, in combination with mercurials—calomel particularly—accelerates the supervention of ptyalism. I have no doubt of the fact. I am disposed to ascribe it to a presumed chemical decomposition in part of the combined articles in the stomach, and a new arrangement by which the activity of the mercurial would be increased; or, if the chemists advise that no incompatibility exists between calomel and quinine, and that no such presumed change can take place in the stomach to account for the alleged fact, then I would suggest that the latter article facilitates the mercurial action simply by counteracting the morbid impression of the febrific agent, and the diseased condition hence resulting, by its specific effect, thus bringing the susceptibilities of the system to a condition approximating the healthy standard; for it must be admitted that first, in proportion to the intensity of morbid action, is the difficulty in establishing the constitutional operation of the mineral in any given case of disease.

Has the free use of quinine increased the disposition to diseases of the bowels—e. g., Diarrhœa and Dysentery?

Broussais, in his "Chronic Phlegmasia," has shown, as we think, very satisfactorily, that long-continued atmospheric heat, combined with moisture, has an invariable tendency to induce chronic inflammation of the mucous coat of the larger bowels, thus giving origin to diarrhœa and dysentery, with ultimate liability to ulceration of the colon and rectum. High and long-continued heat and moisture distinguish the climate of Florida; and when it is remembered that the centripetal tendency of the fluids, in the cold stage of intermittents, (so frequently recurring among the troops serving in that Territory,) determines congestive accumulations and irritations in the internal organs, we think that the prevalence of diarrhœa and dysentery, under these circumstances, is susceptible of explanation without charging anything to the account of quinine.

No pathological view of these diseases can, it is believed, be correct which is irrespective of the condition of the skin. It is fair to presume that this organ is primarily impressed, and that the lining membrane of the primæ viæ is implicated in virtue of the intimate sympathy which is acknowledged to exist between it and the former. The persistence of the bowel affection is then probably due to the derangement of the dermoid apparatus, and, until the latter is restored to its integrity of function, the morbid condition of the bowels can hardly be expected to subside under any plan of treatment.

Broussais has remarked somewhere that when the skin in these forms of disease presents a straw-colored appearance and inelastic condition, ulceration of the mucous coat of the bowels may be apprehended; and that, in a large majority of such cases, a fatal result will ensue.

A very enlarged experience with the bowel affections of Florida has impressed strongly on my mind the opinion, that there are few forms of disease in the catalogue less amenable to the resources of the art.

Post-mortem examinations were instituted in a large majority of the fatal cases in the General Hospital at Cedar Keys, as well as the best Hospitals at different times under my charge in Florida. My observation teaches that the liver and spleen, less frequently presented evidence of diseased condition, than is usual in sections of the country where miasmatic causes of disease prevail. The proportion of cases in which these complications existed, was infinitely smaller in Florida than I had previously observed in Arkansas. Even the swelled spleen, so common in other malarial districts, was a rare spectacle.

I can readily conceive, in explanation of this apparent immunity from congestive enlargements, and from other obvious disease of the liver and spleen, that, where ulceration exists in the larger bowels, in obedience to the law, pathological as well as physiological, "ubi irritatio, ibi affluxus," the fluids impelled towards the central organs, under circumstances calculated to produce irregular distributions, are diverted to the point where irritation exists in greatest intensity. In other words, the irritation of the bowels serving as a "diverticulum," secures the liver and spleen from an influx of blood, sufficient to derange their healthy functions, much less to leave, after death, appreciable traces of organic lesion. I have no reason, therefore, to think that the use of quinine had any agency in inducing acute and chronic affections of the liver and spleen.

With the exception of some few cases of acute dysentery, the fevers above alluded to, and some cases of inveterate ophthalmia, the great majority of the sickness which came under my notice while serving in the Territory of Florida was of a chronic character, and mostly consisting of the protean forms of malarial disease.

Surgeon General's Office, July, 1845.

Tables of the Mortality after Operations.. By THOMAS INMAN, M. D.
(From London Lancet.)

The history of the following tables is this. A year or two ago, I was struck with the number of deaths occurring after amputation, and about the same time met with Dr. Lawrie's and Mr. Phillips' paper on the same subject; from that date I have been occasionally jotting down the reports I have met with in the different periodicals, but did not do much till a few months ago, when circumstances induced me to extend my inquiries, and to comprehend other capital operations besides amputation.

As I have been myself considerably surprised by the results, I have thought it worth while, for the information of others, to give them a wider circulation.

I doubt not that many living operators, if they ever happen to cast their eyes over the columns, will find I have in some degree misstated the results of their operations. This arises from many of my notes being taken long ago, and consequently representing what was correct only at the time they were written. The table would have been much more perfect had I been able to obtain an authentic account of the practice and experience of our most eminent living surgeons.

I cannot help thinking that it would be exceedingly beneficial, if all the hospitals in England, especially the larger ones, would publish an annual record of their operative practice, such as is given for Scotland in the "Edinburgh Medical and Surgical Journal," for January, 1844, No. 158.

Table showing the Average Mortality of Amputations generally, including secondary, primary, for accident or disease.

Where occurring, or by whom reported.	No. of Cases.	Deaths.	Proportion.
Cases collected and reported by Mr. Phillips, occurring in France, Germany, America and England...	640	150	1 in 4 1-8
Cases collected from the various journals by the same author, all probably occurring in Britain.....	308	76	1 in 4
Private notes of London hospital surgeons, by the same author.....	107	28	1 in 3 3-4
France, as reported by Malgaigne: Parisian hospitals for four years.....	587	301	{ 1 in nearly 2
Guthrie, on the field of battle.....	291	24	1 in 11 1-3
Guthrie, secondary in hospitals.....	551	265	1 in 2 1-2
Glasgow Infirmary, Dr. Lawrie.....	276	101	1 in 2 7-10
Pennsylvania and Massachusetts hospitals.....	146	37	1 in 4
Northern hospital, Liverpool.....	96	18	1 in 5
Gendron, Paris.....	79	33	1 in 2 1-2
University College Hospital.....	66	10	1 in 6 1-6
Emery, after battle of Navarino.....	68	14	1 in 4 4-5
Liverpool Infirmary, three and a half years.....	56	4	1 in 14
Guyon, African army of the French, 1837-9.....	63	17	1 in 4
Edinburgh, last year—			
Larger extremities, 18 cases, 13 dead }	38	15	1 in 2 1-2
Lesser extremities, 20 " 2 " }			
Dupuytren.....	59	15	1 in 4
Scotch Hospitals, during last year, exclusive of Edinburgh.....	60	14	1 in 4 1-3
Larrey and Roux.....	38	15	1 in 2 1-2
Larrey, primary, on field of battle.....	13	2	1 in 6 1-2
Dubois.....	28	3	1 in 9
After revolution of 30th July, at Paris, the proportion of deaths was three in four.....	4	3	
Bell states, that out of operations performed on the field of battle, he lost one in 12.....	12	1	
Total.....	3586	1146	1 in 3 7-10

Table showing the Mortality attending the Operation of Amputation.

Operation.	No. of Cases.	Dead.	Proportion.	Remarks.
Amputation				Collected by Malgaigne from the records of the Parisian hospitals, from 1836 to 1840, inclusive.— <i>Archives générales de Médecine à Paris</i> , April, 1842.
of the thigh.....	201	126	1 in 1 3-4	These include amputations for accident and disease; the average mortality of the two is nearly equal.
of leg.....	192	106	1 in 1 3-4	
of foot.....	38	9	1 in 4 1-4	
of shoulder joint..	13	10	2 in 3	
of upper arm.....	91	41	1 in 2 1-4	
of fore-arm.....	28	8	1 in 3 3-4	
of wrist and hand	24	1	1 in 25	
Amputation				Glasgow Infirmary, from 1795 to 1840, reported by Dr. Lawrie— <i>Medical Gazette</i> , 1841.
of the thigh.....	128	46	1 in 2 3-4	These are chiefly taken from the reports of Malgaigne, chiefly military surgery.
of leg.....	62	30	1 in 2	
of foot and ankle..	5	1	1 in 2 1-2	
at shoulder-joint..	6	4	1 in 1 1-2	
of arm.....	53	21	1 in 2 1-2	
of fore-arm.....	20	0		
Amputation of upper extremities, collected from various sources (French military)...	123	66	{ 1 in about 2	
Amputation of lower extremities.....	107	69	2 in 3	
Amputation of upper extremities (various sources).....	144	18	1 in 8	These are collected chiefly from American and British reports, where no distinction has been made between arm and fore-arm, thigh and leg.
Amputation of lower extremities.....	296	75	1 in 4	

Table showing the Mortality attending the Operation of tying the Large Arteries.

Artery subjected to Ligature, &c.	No. of Cases.	Deaths.	Proportion.
Cases collected by Phillips from the works of Boyce, Lancici, Scarpa, Pelletan, &c., where old operation was performed:			
Femoral tied.....	22	6	1 in 3 3-4
Humeral tied.....	7	1	1 in 7
Hunterian operation—			
Ligature of arteria innominata*.....	6	6	all die.
Ligature of subclavian.....	40	18	1 in 2
— of carotid.....	40	11	1 in 4
Abdominal aorta.....	3	3	all die.
Common iliac.....	8	3	1 in 2 2-3
Internal iliac.....	4	2	1 in 2
External iliac.....	27	9	1 in 3
Femoral.....	42	7	1 in 6
Total.....	199	66	1 in 3

* The only successful case, if so it may be called, is related by Mr. Porter, of Dublin, where the artery was cut down upon and found too much diseased to bear the ligature; the wound closed readily, and the aneurism was cured.

Some discrepancies exist in the calculations of various authors as regards the mortality of this operation. Phillips states that out of 171 cases he has collected, 57 died. Lisfranc states that he has collected the reports of 180 cases where the Hunterian operation has been performed, and gives the deaths at 40 only.

The above table is drawn out after carefully examining all the medical periodicals for a long series of years, and the author believes it may be relied on as being the closest possible approximation to the actual truth.

Table showing the Mortality attending the Operation for Lithotomy.

Nature of operation, where recorded, by whom or where performed.	No. of Cases.	Deaths.	Proportion.
Frere Jacques (recorded by various authors).....	124	7	1 in 17.57
Raw (the only official register extant that I can find noticed).....	22	4	1 in 5.50
Cheselden.....	213	20	1 in 10.65
Naples: lateral operation—cases operated on in the public hospitals, from 1821 to 1828.....	643	100	1 in 6.43
Dupuytren—bilateral operation.....	99	19	1 in 5.21
Dupuytren's account of the practice of the Parisian hospitals and private cases, 1836.....	356	61	1 in 5.84
Dudley, Kentucky.....	153	4	1 in 38.25
Chrichton, of Dundee.....	71	8	1 in 8.88
Norwich hospital for the last 60 years.....	704	93	1 in 7.62
Leeds Infirmary, from 1767 to 1817, according to Dr. Prout.....	197	28	1 in 7.04
Bristol Infirmary.....	.....	.....	1 in 4.12
Bransby Cooper.....	104	10	1 in 10.4
Llston.....	22	2	1 in 11
Hotel Dieu and La Charité, Paris.....	1200	225	1 in 5.33
Luneville.....	1629	147	1 in 11.1
Frere Côme.....	100	19	1 in 5.26
Pajola.....	50	5	1 in 10
Pauza.....	70	5	1 in 14
Ournard.....	60	5	1 in 12
Joucil.....	83	3	1 in 17
Total.....	5900	765	1 in 7.72

Table showing the Mortality attending upon the Operation of Gastrostomy and the Cæsarian Section.

Where or by whom recorded, nature of operation, &c.	No. of Cases.	Deaths.	Proportion.
Cæsarian section. Dr. Churchill: 414 cases, 186 died, = 1 in 2.12			
Cases collected by Mons. Figuera: 790 cases, 424 fatal, = 1 in 1.86			
Cases well authenticated, collected by Dr. Churchill, all occurring since A. D. 1750*.....	391	172	1 in 2.27
Removal of Dropsical Ovary, where operation was completed.....	33	11	1 in 3
Operation for extirpation, where either no tumour existed, or wherein surmountable obstacles prevented the removal of the diseased mass.....	9	3	1 in 3
Total.....	363	186	1 in 1.95

* Out of twenty-eight persons who had the operation performed on them more

Table shewing the Mortality attending the Operation for Hernia.

Where or by whom recorded, &c.	No. of Cases.	Deaths.	Proportion.
Sir A. Cooper's work on Hernia.....	77	36	1 in 2
Travers.....	14	8	1 in 1 1-2
ewar, of Dunfermline.....	17	4	1 in 4
carpa, (on Hernia).....	16	5	1 in 3
awrence (on Hernia).....	22	7	1 in 3
lement.....	8	3	1 in 2 2-3
Key (he performed the operation forty times, but no detailed account is given of all the cases).....	12	6	1 in 2
Wurtzburg, from 1816 to 1842.....	56	24	1 in 2 1-2
Recorded in different periodicals as isolated cases, &c.	88	30	1 in 3
Malgaigne, Hospital of France:			
Patients between fifty and eighty years of age...	97	70	1 in 1 1-4
Other ages.....	86	44	1 in 2
Fry's Hospital, from Sept. 1841, to Dec. 1843.....	19	10	1 in 2
Scotch Hospitals during 1843.....	11	3	1 in 3 2-3
Cases witnessed by the author.....	6	3	1 in 2
Liverpool Infirmary, for two years.....	4	1	1 in 4
Liverpool Northern Hospital—nine years.....	12	6	1 in 2
Total.....	545	260	1 in 7 3-4

Turning.—By J. Y. SIMPSON, M. D., F. R. S. E., &c. (From London and Edinburg Monthly Journ. of Med. Science.)

[Many writers on Midwifery recommend that in the operation of turning, both feet should, if possible, be grasped and pulled down. We entirely agree with Professor Simpson in the following very judicious remarks.]

In most cases I hold this method to be improper and unjustifiable, because it is almost always more difficult to seize both extremities than to seize one; because one is quite sufficient for our purpose, and more safe for the life of the mother; and because by pulling at one extremity (when pulling does happen to be required after the version is accomplished) we more perfectly imitate the natural oblique position and passage of the breech of the infant, that when we drag it down more directly and more upon the same plane, by grasping and dragging at both limbs equally. The infant also assuredly incurs less risk of impaction of the head, and above all, less chance of fatal compression of the umbilical cord, when the os uteri and maternal canals have been dilated by the previous passage of the breech, increased in size by one of the lower extremities being doubled up on the abdomen, than when both extremities being seized and ex-

than once, only three died—i. e., there were seventy-three operations on twenty-eight persons, and only three deaths.—[From Dr. Churchill's Midwifery, &c.]

tended, these same passages are more imperfectly opened up by the lesser-sized wedge of the breech alone. Notwithstanding, however, the great difficulties and consequently the greater dangers attendant on the operation, when we search for, and grasp both lower extremities, instead of one, it is still so dogmatically laid down as a rule by most obstetric authorities, that many practitioners seem to deem it a duty, not to attempt to turn the child without having previously secured both feet.

In few or no cases of turning is it proper or requisite to bring down both extremities, unless in the complication of turning under rupture of the uterus. In that case, but in that only, ought we to follow at once this procedure—and here we follow it because, if we left the other extremity loose in the uterus or abdomen it would be apt to increase the lesion in the walls of the organ, if it happened to get involved in the aperture, or impacted against its edges. In some very rare instances in which, after version by one leg has been effected and immediate delivery is necessary, the cervix and os internum occasionally contract so forcibly and strongly upon the protruded limb, whenever we drag upon it, as not to allow a sufficient amount of traction being applied to this extremity without fear of lacerating its structures. In such cases it may be well to attempt to repass the hand to secure the other extremity, for then by pulling at both extremities together, we incur less chance of injuring them than if we applied the same required amount of force to either of them singly.

Should we seize one extremity only?—From what I have already stated, you know my opinion as to this being the proper method of proceeding in almost all cases of difficult turning. The method was long ago spoken of by Portal; and within the present century, Hoffman and Jeorg in Germany, and my friend, Dr. Radford, in this country, have severally written on the subject, and upheld, that, in no case of turning ought we to lay hold of more than one extremity, for the purpose of effecting the version of the infant. I have just pointed out what I conceive to be two—perhaps the only two—exceptional conditions to this general rule.

I believe the seizure of the knee to be preferable, in most, if not in all cases, to the seizure of the foot, or, rather, as it should be more correctly stated, to the seizure of the ankle of the child. I speak, you will recollect, of turning in cases of shoulder or arm presentation, in which the liquor amnii has been for some time evacuated, as in Anderson's case, and the uterus by its tonic contraction has clasped itself around the body and head of the child. Under such circumstances, it is an object of importance not to be obliged to introduce our hand farther than is absolutely necessary, into the cavity of the uterus, because the contraction of the organ, in many cases, opposes its introduction, and the forced introduction of it is apt to produce laceration. It is an object also of equal moment to attempt to turn by a part which produces as little change as possible in the figure and form of the infant; because, if we thrust any of the

angulated parts of the child against the interior of the contracted uterus, we should also thus be still more liable to produce rupture of that organ. Now, holding these points in view, it appears to me, that the turning of the child, by seizure of the knee, presents several decided advantages over turning of the child by seizure of the foot. For, 1st. The knee is more easily reached. As we slip our hand along the anterior surface of the protruding arm, and along the anterior surface of the thorax of the child, we always, if the attitude of the child has not been altered by improper attempts at version, or very irregular uterine action, find the knees near the region of the umbilicus of the infant—the lower extremities, as you are aware, being folded up *in utero* so that the knees are brought up to that part, and the legs flexed upon the thighs in such a manner that the heels and feet lie nearly in apposition with the breech of the child. To seize a foot, therefore, we should require to pass our hand about three inches (or, in fact, the whole length of the leg) *further* than we require to do in order to seize a knee. 2nd. The knee affords the hand of the operator a much better hold than the foot. By inserting one or two fingers into the ham or the flexure of the knee, we have a kind of hooked hold which is not liable to betray us. Every one, on the other hand, who has turned by the foot or feet, knows how very apt the fingers are to slip during the required traction, and how much in this way the difficulties of the operation are sometimes increased. 3d. We produce, I believe, the necessary version of the body of the child more easily by our purchase upon the knee—because thus we act more directly on the pelvic extremity of the infant's spine, than when we have hold of a foot. 4th. Turning by the foot appears to me to endanger greatly more the laceration of the uterus than turning by the knee. The reason of this is sufficiently evident. When we turn by the foot, we have to flex the leg round upon the thigh, and thus, at *one* stage of the operation, and during one part of the flexion of the leg, we are obliged to have the leg bent to a right angle with the thigh, and the foot of the infant thus projected and crushed against the interior of the uterus. You see this when, on the infant before me, I seize hold of the foot and turn it round from its position at the breech, till I bring it up to the shoulder, the part which we are supposing to present at the os uteri. You can easily thus perceive that, when the angled and long leg of the child is thus brought round, it must rasp and scratch (if I may so speak) along the interior of the contracted uterus, and endanger, to a fearful degree, the laceration of the organ. It is needless to say how much all this danger is increased, when, after having brought down one foot, we pass again our hand, and attempt to bring down a second foot (as is recommended by some authors), for thus we only double the danger of the laceration of the uterus, from the forced and obstructed passage along its interior, of this other extremity.

One point remains for our consideration. Granting that it is proper to seize a knee, I think it matter of the very first moment to know

which knee should be seized. On this point you will find no directions in any of our modern obstetric works, British or foreign, as far as I know them; and yet I believe the secret of turning with facility and safety in such a case as Anderson's—with the waters evacuated and the uterus contracted—depends upon the knowledge of which of the two lower extremities of the infant should be seized. If we turn with one of the extremities—and whether the foot or the knee—it should be the foot or knee of the limb on the *opposite side of the body* to that which is presenting. Thus, if the right shoulder or arm presents, we should take hold of the left knee or foot: and if the left arm or shoulder presents we should take hold of the right knee or foot. I repeat, that I believe this point to be of the most essential importance; and the reasons for the rule are simple. In bringing down the fœtus in the operation of turning, we may, and should produce two kinds of alteration in its position and figure. Thus, we may bend or flex the body forward upon the *transverse axis* of the trunk; and we may rotate or turn the body round upon the *longitudinal axis* of the trunk. If we merely flex it, the operation of version will be one of difficulty; if we both flex and rotate the trunk at the same time, the operation will be one of comparative facility. By merely flexing the body upon its transverse axis, we are liable to bring down one of the lower extremities, while we do not displace the upper extremity, which is primarily presenting at the os uteri. If we both rotate and flex the body—that is, turn it both on its transverse and longitudinal axis—at the same moment while we bring down the pelvic extremity of the child, the turning of the body of the infant carries away from the os uteri the part originally presenting.

Many of you must be acquainted with the fact, that obstetric authors have proposed various methods of removing away from the cervix uteri the presenting arm or shoulder, in order to allow of more space for the part which is brought down, and to produce the necessary evolution of the child. Thus some recommend the presenting part to be pushed up before we seize the feet; others advise the foot to be seized with the one hand, and the presenting part to be pushed up with the other; and others again counsel us to bring down one or both feet, secure them with a tape (as you see in the plate of Moreau), and, whilst pulling with this tape, to introduce the hand, after the lower extremities are brought down, for the purpose of pushing up the presenting portion of the upper extremity. All these rules and complications are at once avoided by following the principle that I have just stated to you, of bringing down, whenever it is possible, the knee opposite that of the presenting arm or shoulder. When we do this, by carrying the knee diagonally across, if I may so speak, the abdomen of the child to the os uteri, we both, as I have said, *flex and rotate* at the same time the trunk of the infant, and in doing so, the semi-rotation of the trunk inevitably carries up the presenting arm, in proportion as the knee which is laid hold of is pulled

down by the operator. I would add this, as another of the advantages of turning with one extremity, for if we pulled down both knees or both feet, or the foot or knee which was nearest to us, we should produce in many instances mere flexion of the body *without* that rotation of it which is necessary to carry up and out of the os uteri, the presenting part of the infant.

I have insisted upon the advantages of taking hold of the knee that is highest and furthest from you, and believe this is to be a matter of the very first moment. Now, it may appear to some of you that it would be more difficult to seize this knee than the knee of the side corresponding to the presenting arm; but if you reflect for a moment you will see that this difficulty is more imaginary than real. Both knees of the child, as the infant lies folded up in utero, are generally in juxta-position, and lying upon the abdomen of the infant, near the umbilicus. If, therefore, in passing your hand into the uterus, you insinuate it as you ought to do, along the anterior surface of the thorax and abdomen of the child; you come in contact with both knees at the same time. And the rule which I would give you is this, that instead of hooking your finger, or fingers into the flexure of the lower or nearer knee, you hook them instead into the flexure of the upper, more distant, or opposite one. Both are so far, in general, equally near, or equally distant, and you seize the one or the other according as you take care to turn your finger so as to hook it into the flexure of the lower or the flexure of the upper.

PART III.—MONTHLY PERISCOPE.

Case of Division of the Spinal Marrow. By ELI HURD, M. D., of Middleport, Niagara County, New York. (Communicated for the N. Y. Journ. of Medicine, by JAS. WEBSTER, M. D., of Rochester.)—The following remarkable case of injury of the spinal marrow is believed to be without precedent, or at least to present sufficient points of interest to warrant its publication:

On the 24th of April, 1829, J. S. Spalding, of Hartland, N. Y., jumped from the top of a lumber wagon box on to a stick of timber lying upon the ground; and as his feet struck the timber, the surface being wet, they slipped instantly from under him, and he fell upon his back and left side. When he came to a rest, he found himself partly under the wagon, and between the wheels, the wagon and timber being parallel to each other. From this position he endeavored to extricate himself, but found his lower extremities benumbed and powerless. He then called out for assistance, saying that he had broken his back on the edge of the timber in his fall. He was immediately extricated from his perilous situation, and informed by his

assistants that there was a chisel sticking in his back. This chisel, when he jumped from the wagon, was in his coat-pocket. An attempt was promptly made to extract the instrument, which resulted in pulling off the handle only.

I was then called, and in a few moments was on the spot, where I found my patient in the arms of three or four men, his back exposed, and an iron tool, which proved to be a part of the shank of a chisel, projecting from the skin. This I seized with a pair of blacksmith's pincers, such as are used for pulling off horse-shoes, and bracing myself, endeavored to extract it, instead of which I pulled him out of the hands of those who had hold of him. We then braced ourselves once more, and after a prolonged and severe effort, succeeded in drawing out a chisel, *five inches in length to the shoulder*, seven-eighths of an inch wide, and from a quarter of an inch at the shoulder tapering to less than one-eighth of an inch in thickness at the cutting extremity.

The wound was then dressed, and the patient carefully conveyed home. At the time of extracting the instrument, he says that he saw "vivid flashes of light, which were apparently followed by total darkness." During the operation he was conscious of very little pain.

The wound made by the chisel was opposite the spinous process of the lower dorsal vertebra, on the left side. At its superior extremity it was half an inch from the spinous process, and one inch at its inferior extremity; so that a line drawn parallel to the spinous process of the vertebræ, and three-fourths of an inch to the left, would have intersected it in the middle. The direction of the instrument was upwards, at an angle from the surface of twenty to twenty-five degrees, and to the right of about twelve degrees, penetrating the spinal column, and undoubtedly entirely dividing the cord. Perfect insensibility of the skin below the wound, with paralysis of the lower extremities, bladder and rectum, was the immediate consequence. The shock that the system received produced great prostration for some forty hours, when reaction took place, and was followed by fever for ten or twelve days. The external wound cicatrized in a few days, scarcely discharging a spoonful of pus. The urine was drawn off by means of the catheter for six days after the accident, when the bladder began to resume its functions, and two days after the instrument was discontinued. Cathartics failing to move the bowels during the same period of time, and for two or three days longer, dejections were procured by stimulating enemata. Returning sensibility occurred in the skin the fifth day, and an imperfect use of the limbs about the fifteenth.

My attendance was twice and thrice daily for the first six days, once daily for the next eleven, then occasionally until the twenty-first after the accident (May 15), when the patient was dismissed from my charge. He first commenced locomotion on his hands and knees, then by pushing a chair round, and afterwards by means

of crutches, which he has been obliged to use ever since. Distortion of the feet and ankles commenced some weeks after his efforts to get about on crutches, and increased for several years thereafter; yet his general health continued good.

The treatment during the state of prostration was by diffusible stimulants, through the febrile stage by antiphlogistics; while friction, with stimulating liniments to the paralyzed parts, was used throughout both stages, and for months afterwards.

[The following additional particulars, written subsequently and recently communicated, complete the history of this remarkable case.]

Sensibility of the skin and action in the inferior extremities returned very slowly; so much so, that four years and seven months after the accident above-mentioned, carelessly sitting or kneeling with his left knee nearer than usual to the hot fire, without feeling any pain, or being conscious of suffering, the skin and integuments over the knee-pan and on either side of it were so badly burned, that mortification and sloughing took place. This was so deep, that the cavity of the joint was opened and exposed to view. The patella was covered only by the periosteum; and after a few days, as he was endeavoring to draw his leg up in bed, broke transversely across. The superior portion of the patella protruded so much from the wound in consequence of the retraction of the extensor muscles, that, after various unsuccessful attempts to reduce and keep it in place, it was removed by amputation. The knee was now much inflamed and swollen. The wound gaped horribly, and every symptom gave indication of a fatal issue. A fungus vegetation sprang up from every side of the wound, filled up the cavity, and formed a spongy protuberant mass above and around it. Hemorrhage followed every application of caustic that was made to check its exuberant growth, as well as compression, even the slightest touch. The miserable patient became extremely exhausted, and amputation of the diseased and crippled limb seemed the only alternative, and even that a doubtful one.

At this juncture, December 23, 1833, which was more than three weeks from the time of the burn, and the seventh of my attendance, I commenced dressing the wound with "*Singleton's Golden Ointment*," according to the analysis of Mr. Thomas Clark, of Glasgow, Scotland.* This soon arrested the morbid action, reduced the size of the fungoid mass, and gave it a healthy appearance. Convalescence slowly followed. January 22, 1834, I introduced a seton in the sound parts above the wound, and on February 4th the patient was dismissed cured. He has since remained well. No ankylosis of the joint at the time occurred, nor has since taken place. On the contrary, he has complained of its being rather too flexible.

A large, ugly-looking puckered cicatrix remains over and above

* See No. 12 of the Glasgow Journal, or Medico-Chirurgical Review, new series, vol. XIV.

the left portion of the joint. The inferior portion of the patella is drawn round upon the outside of the knee-joint. The leg is rotated outwards, and the heel thrown in so as to point to the hollow of the right foot. The toes are thrown out and drawn up towards the metatarsal bones, and the whole foot is drawn inwards, and flexed upon the tibia in such a manner as to make almost a right angle with the leg. There is also considerable deformity of the right foot and ankle, though less than of the left.

The general treatment was by wine, tonics and opiates. The local unimportant otherwise than above-mentioned. He was under my care, in the treatment of the limb, for thirty-three days, and slowly thereafter recovered the use of his limbs, except the previous decrepitude, which has considerably increased since.

Such is a brief account of this extraordinary case; embracing and detailing, however, all the important and material facts that transpired both with regard to disease and treatment, from the time of its first unfortunate occurrence till its final termination in health.

There is no curvature of the spine, nor has there been at any time. Nor is there any complaint whatever of the back. He can get into and out of a carriage, mount a horse from the ground without assistance, and ride off at any pace. He has been elected constable and collector of the town where he resides for a number of successive years, discharged the duties of his office acceptably to the public, and attends to many other kinds of business. He has married within two years, and has one child. In fact, he is, in every sense of the word, as well as he ever was, except his crippled condition.

[We regard the above case as unique, as far as our knowledge extends, and the facts are abundantly corroborated. That the spinal marrow was completely divided, and afterwards united, there seems to be no doubt whatever. Perhaps it may be deemed not more remarkable than the union of nerves after division for tic douloureux, a fact well authenticated, as the spinal cord may be considered no more than a bundle of nerves contained within a common sheath. Cases also are recorded where incised wounds of the brain have united, and the patient recovered; but, so far as we are informed, this is the first instance on record of a total division of the spinal cord.—*Ed. N. Y. Jour. Med.*]

Conclusions regarding Tubercles.—1. Tubercle is a secreted substance, deposited under the form of yellowish opaque grains. It grows by superposition. 2. There are two species of tubercles, the simple and the multiple; the latter forms by the aggregation of several simple tubercles. It contains organized parts within. 3. Granulations are a form of chronic pneumonia; they do not pass into tubercles. 4. The softening of a tubercle depends on the action of the surrounding living parts. 5. Simple tubercle never softens from the centre to the circumference. 6. The multiple tubercle often softens from the centre to the circumference. 7. The most

frequent seat of tubercle is the cellular tissue. Tubercle is sometimes to be seen in the lymphatic vessels. Tubercle does not occur on the free surface of mucous membrane so long as it is entire. 8. Tubercles are often hereditary. 9. The lymphatic and sanguineo-nervous temperaments are predisposed to tubercles. 10. Infants and females are most subject to tubercular diseases. 11. Inflammation is an exciting cause of tubercles. 12. The same is to be said of passive congestions, of over-activity or deficient activity of an organ, and probably also of the alterations of the fluids. 13. No certain sign of the rise of tubercles is known. 14. The hectic fever which occurs in tubercular diseases results from the act of elimination. 15. To prevent the tendency to tubercles, we must counteract the influence of hereditary disposition, of temperament, of age, of sex. 16. In persons with predisposition to tubercles, inflammations should be guarded against with the greatest care, or arrested as promptly as possible. 17. The same rules apply to passive congestions. 18. The absorption of tubercles is very probable. 19. To obtain the cure of tuberculous ulcerations we must prevent the formation of new tubercles, and confine the work of elimination within certain limits. 20. Tubercles may remain long in the organs in a latent state; to obtain this result we must seek to arrest the process of elimination by antiphlogistic means, and above all by revulsives.—*From M. Lombard.—(Northern Jour. of Med.) Braithwaite,*

VARIOUS OPINIONS RESPECTING HOOPING-COUGH.

Dr. Waller has tried belladonna in two cases of hooping-cough, with the best results. He gave the extract in a twelfth of a grain dose, three times a-day, to a child four years of age. In his cases there was no indication of the presence of inflammation, but simply the spasmodic cough. Prussic acid and conium had failed in affording any permanent or marked relief.

Mr. Crisp views the disease generally as inflammatory, or at least congestive, and usually finds the antiphlogistic plan the best treatment in the early stages. He has proved prussic acid of service only for a day or two.

Dr. Willshire has treated simple uncomplicated hooping-cough with two or three ipecacuanha emetics, one every alternate morning, followed for two or three days with nauseating doses of antimony, and has found this plan of great service in the early stages. Conium and ipecacuanha were afterwards useful. He is afraid to employ belladonna, as some have found that it has a tendency to increase vascular action in the brain, and to produce hydrocephalus.

Dr. Chowne lays particular stress on the necessity of keeping the patient in a warm temperature, and using every means to prevent his catching cold. Nauseating doses of ipecacuanha were frequently of benefit. He does not believe that emphysema could be produced by hooping-cough.

Dr. Clutterbuck looks upon whooping-cough as a specific disease produced by a specific cause—an inflammation of the bronchial membrane of a specific character, apt to induce inflammation of other organs, as of the lungs or head, and these complications constitute the character of whooping cough. He has little confidence in any remedy for this affection. The disease should be narrowly watched, with the view of prevention rather than of active treatment. If mild, it would terminate spontaneously; if it threatened the complications alluded to, decided antiphlogistic means were demanded.

Dr. Golding Bird regards whooping-cough in the first stage, as invariably inflammation of the lining membrane of the bronchial tubes, larynx and trachea, of a specific character, and implicating in some peculiar manner, the par vagum. This inflammation lasted a definite period, which was influenced by constitution, and other causes. In the second stage of the affection, the disease was nervous, the specific irritation of the par vagum being kept up, altogether independent of inflammation; or if this were present, it was accidental: the whooping was afterwards protracted, by the influence of habit. In the first stage, the remedies for bronchitis were advisable—such as emetics, diaphoretics, the warm-bath, and a warm temperature. When the inflammatory stage was passed, the object of the practitioner was to subdue irritation in the par vagum, and this was effected by the agency of narcotics—such as conium, in conjunction with the carbonate of potash, hemlock, and hydrocyanic acid. Embrocations to the spine and chest were also useful. When bronchorrhœa became troublesome, small doses of alum, with sedatives, were employed with advantage. When the bronchorrhœa had ceased, tonics were indicated—the kind of tonic to be determined by the constitution of the patient. Emphysema does not, in his opinion, occur as the consequence of whooping-cough.

Dr. T. Thompson has found, in some cases, where belladonna was given, that the poisonous, rather than the curative effects of that remedy developed themselves, even though the doses administered were remarkably small. With reference to the irritation of the par vagum in whooping-cough, he relates a case in which this nerve had become exposed, from the formation of an abscess, or other cause: and it was remarkable, that when the nerve was in contact with air, a spasmodic action resembling whooping-cough was produced; when the nerve was covered over by a cicatrix, the whooping-cough ceased.

(*Lancet*, and *Braithwaite*.)

Physiological Effects of Conium Maculatum or Hemlock.—In the July No. of the American Journal of the Medical Sciences, is an Article entitled "Experiments to determine the Physiological effects of *Conium Maculatum*, by Pliny Earle, M. D." Dr. E. is well and favorably known to the profession and community, as Physician to

the Bloomingdale Asylum for the Insane, located near New-York city; and he has contributed largely to the pages of the valuable quarterly just mentioned. In the Article before us, he says:

“The conium maculatum, in the form of extract or inspissated juice, is somewhat extensively used in general practice; and, being considered, as it unquestionably is, a narcotic, is not unfrequently prescribed as a *soporific*. Having for several years been accustomed to the free use of this preparation in the treatment of insanity, without ever procuring sleep as its effect, even in doses gradually raised to sixty, eighty and ninety grains, three times in the day,—and having not long since heard an eminent physician, who prescribes for his patients ‘nearly a hundred dollars worth’ annually, express a doubt that this extract has ‘any medicinal virtues whatever,’ I determined to ascertain, by self experience, the nature of its immediate effects upon the human system.”

Having obtained a good preparation, he commenced his experiments by taking on the 1st January last, 1 gr. doses three times a-day. These were gradually increased every day, until he took the enormous dose of 60 grs. three times daily. Indeed, of the English preparation, he ventured to take 80, 90, and even 100 grs. at a dose—i. e., in the course of some twelve or fifteen hours, he swallowed 270 grs. of *Cicuta*.

The effects were negative until he reached 25 grs. taken fasting, when he “felt a disagreeable sensation, ‘like the fulness of the head,’ occasioned by a ligature around the neck; accompanied by a very slight vertigo.” The two subsequent doses on this day (the 15th) were unattended by these effects. 30 grs. the next day produced symptoms similar to those of yesterday; 40, 45, 50 and 60 gr. doses gave rise to sensations of fulness of the head, vertigo, dimness of sight, dilated pupils, double vision, weariness and weakness in the limbs, particularly in the knees; heat in the gastric region, &c. In ten minutes after taking a dose of 60 grs., warmth in the stomach was perceived; in 15 minutes the cerebral symptoms commenced, and in about half an hour the action of the medicine had reached its maximum. In less than two hours, the apparent effects had entirely disappeared. Throughout the experiments, the sleep seems to have been natural, appetite good, and the pulse regular, perhaps a little slower, but stronger and fuller. The effects, as might be expected, were greater when the medicine was taken fasting.

Anti-gastralgic Pills.—(*Journal des Connaissances.*) M. DeLarue asserts that, for the last six years persons laboring under true gastralgia, have generally found prompt relief from the use of pills made according to the following formula :

Extract of Opium,	30 cent. (1½ gr.)
Sub-Sesqui-Carbonate of Iron,	60 “
Magnesia,	120 “
Gum Syrup, q. s.	

Make 24 or 48 pills, according to age, individual susceptibility, &c. Give one two hours before breakfast, and another three hours after the last repast in the evening. They should be administered alone, or associated with other auxiliary remedies, and taken with or without interruption, according to circumstances.

They accomplish a cure most commonly in a month or six weeks.

Treatment of Chronic Dropsy. By Dr. KERNER.—*Journal des Connaissances.*—The inhabitants of Weinsberg, no doubt in honor to the name of their locality, are great drinkers, and are therefore very frequently hydropic. When their anasarca does not depend upon any organic visceral or vascular lesion, Dr. Kerner effects a prompt cure by prescribing a decoction of

Digitalis Purpurea,	2 gram. (40 gr.)
Root of the Ononisspinosa,	4 “
Senega root,	6 “

The whole acidulated with the citrate of potassa. This diuretic formula causes a rapid disappearance of the serous swelling of the abdomen and feet.

Treatment of Nervous Cephalalgia.—Many different preparations have been proposed to combat simple nervous head-ache; and all practitioners have had numerous occasions to regret the failure of these different means. M. Scheneider, one of the most distinguished physicians of Germany, recommends the administration, either in the form of pill or potion, the alcoholic Extract of Aconite (*aconitum napellus*) in doses of ¼ to 1 gr.—(*Gaz. des Hôpitaux. Bulletin Gén. de Thérapeutique.*)

Employment of Cochineal in the treatment of Hooping Cough.—During an epidemic of hooping cough which prevailed with measles last winter in Berlin, Dr. Beunewitz says he had frequent occasions

to satisfy himself of the therapeutic efficacy of cochineal in the first of these diseases. Not only did the attack sensibly diminish in force and frequency, but complete restoration was often effected in at least fifteen days. After previously giving an emetic, Dr. B. prescribes the medicine as follows :

R. Cochineal, 4 grammes (about 4 ℥.)

Salts of Tartar, 8 gram.

Boiling water 45 gram.

Simple Syrup, 30 gram.

Mix. Give this in forty-eight hours. The author says he did not succeed by this preparation in the treatment of the cough complicated with the measles.—(*Casper's Hochenschrift, et Journal de Med.*, 1848. *Bulletin Gén. de Thérapeutique*.)

Treatment in Cases of Burn.—Dr. Wm. Jones, of Lutterworth, has sent to us for publication, the following fact :—About twenty-five years since I was called to a young lady who was dreadfully burnt on the thighs and abdomen. It appeared to us a hopeless case. It immediately struck me that the administration of a very strong opiate afforded the only shadow of a chance for the patient. That, therefore, I immediately gave her. A tranquil sleep resulted. When its effects went off I repeated it, and I was quite surprised not only to see how little she suffered, but how kindly the burnt parts cicatrized and healed. I have always used it with great advantage.—*Lancet*.

■ This treatment has been successful in the hands of others.—*Edrs.*

On Amputation of the Penis. By ROBERT BARNES, M. D.—M. Ricord's proceeding is this :—having performed the amputation, with the precaution of preserving sufficient skin, and no more, to sheathe the corpora cavernosa, and secured the vessels, the surgeon seizes with the forceps the mucous membrane of the urethra, and with a pair of scissors makes four slight incisions, so as to form four equal flaps; then using a fine needle, carrying a silk ligature, he unites each flap to the skin by a suture. The wound unites by the first intention; adhesion being formed between the skin and mucous membrane, which become continuous, a condition analogous to what is observed at the other natural outlets of the body. The cicatrix then contracting, instead of operating prejudicially, as in the old methods, tends, on the contrary, constantly to open the urethra, whilst a perfect covering is provided for the ends of the corpora cavernosa. In the spring of 1843, I had the satisfaction of seeing this ingenious operation performed by M. Ricord, at the Hôpital du Midi; when I saw the patient, eight days afterwards, the sutures had been removed,

union had taken place between the skin and mucous membrane, and the urine had freely passed without the intervention of a catheter. I saw this patient again when he was about to leave the hospital, at which time the cicatrix was complete, the orifice of the urethra patent; there was an excellent stump, and, in short, the operation appeared to be perfectly successful. M. Ricord has performed the operation in other cases, and, he reports, with the same happy results. I have performed the operation many times on the subject, and have found no difficulty in the execution of it.

Another inconvenience mentioned by Mr. Hancock, the difficulty of directing the stream of urine, is one which becomes troublesome in proportion to the shortness of the stump. It may be obviated by the contrivance recommended by Ambrose Paré. The patient must provide himself with a funnel-shaped canula, made of box, ivory, or metal, the base of which, being applied over the stump, and resting on the pubes, the other end will serve to carry the urine clear of the person.—*London Lancet*.

Excision of the Urethra performed successfully in a woman.
By Prof. RIBERI.—*Archives Générales*.

In this case there was a cancerous tumour developed in the wall and existing in the cavity of the urethra in a woman of 60 years of age—the tumour projected towards the vagina, whose orifice it diminished; it caused almost continual pains and great difficulty in urination.

M. Riberi made an antero-posterior incision on each side of the urethra, in the vagina; then he dissected on each side of it so as to leave the tumour adherent only by the neck of the bladder. Having reached this point of the operation, he cut circularly in front of the neck of the bladder, and thus removed the tumour. Finally, a sound was introduced into the bladder, through the very small portion of the urethra which remained, and the hæmorrhage was arrested by a tampon. The patient was cured, and what is important, without incontinence of urine.

The author believes that this operation is unique in the science, and gives a more advantageous process in case it should again become necessary. This process consists in placing the sound in the bladder, before the excision is made, and in slitting the urethra upon that instrument, in order to be enabled to remove the tumour with greater facility.

Treatment of Ulcers on the Cornea by occlusion of the eye.—
M. H. LARREY, Professor at the Val-de-Grace Hospital, speaks high-

ly of a mode of treatment he has adopted for ulcers on the cornea. He places on the eye a little wad of cotton maintained by adhesive strips and a bandage. At the end of ten or twelve days, the conjunctivitis which accompanied the ulcer is found to have disappeared, and the latter has cicatrized or been very much reduced in size.

(*Gazette des Hopitaux. Bulletin Gén. de Thérapeutique.*)

To apply Camphor to a Blister.—This is often recommended to prevent strangury. To obviate the difficulty in powdering the camphor sufficiently fine, we see in the 28th vol. of the *Bulletin Général de Thérapeutique*, M. Vei proposes a saturated solution of this article in ether. Spreading this on an oily or greasy rag, the camphor is deposited by evaporation.

Test for Bile, by M. PATTENKOFFER (*Lancet*, Oct., 1844).—Add to the fluid supposed to contain bile, concentrated sulphuric acid until it becomes hot, and then drop into it a solution of sugar; the presence of the bile is manifested by the mixture becoming of a deep pink, or red color, varying in intensity.

Secale Cornutum, its therapeutic action—by M. PAYAN. *Gazette Médicale de Paris*, June, 1845.—Since Dr. Olivier-Prescot introduced *secale cornutum* into therapeutics, numerous researches have been made upon it. For a long time it was regarded only as an excitant of uterine contractility, and even this specific property has been sometimes denied. At the present time it seems to be admitted that the *secale cornutum* acts not only upon the uterus, but also upon the rectum, the bladder and the inferior extremities, whenever these parts are in an asthenic condition. Its therapeutic effect being thus complex, we are compelled to refer its action to some organ which has the power of acting at once upon all these parts. According to M. Payan, the spinal marrow is the organ primarily affected by the action of the *secale cornutum*, and this opinion of the direct influence of this article upon the spinal marrow is supported by very ingenious reasoning, and what is better, by very interesting cases. These cases place beyond doubt the efficacy of this medicine in incomplete paralysis of the bladder, rectum and inferior extremities; and in all these cases, according to the author, the excitation is transmitted by means of the nerves which have their origin in the *medulla spinalis* or of the plexuses which emanate from it.

Treatment of Amenorrhœa.—Dr. CHAUMET, of Bordeaux, prescribes the following enmanagogue pill, which many times has produced the happiest effects :

R. Ext of Gentian,	gr. V.	} . Mix.
Aloes, }	
Calomel, }		
	ââ gr. 1	

Take a pill thus made morning and evening. To aid the purgative effect of these pills, apply mustard and hot water to the feet, and dry cupping to the hypogastrium, and internal parts of the thighs.—(*Bulletin de l'Acad. de Méd. Bulletin Gén. de Thérapeutique.*)

Return of Suicides in France, during the year 1843.—According to the official returns made for 1843, there were 3,020 suicides in France that year. The Department of the Seine, of which Paris is the capital, furnished 551, or nearly a fifth of the whole number. Submersion or drowning was the mode generally resorted to—1096 individuals had recourse to this means—954 to strangulation or hanging—450 to fire arms—206 to asphyxia by charcoal. A fourth of the suicides did not possess the intellectual faculties entire. Among the number were 729 females, nearly a fourth—15 were under sixteen years old, 20 octogenarians, 170 septuagenarians, and 884 sexagenarians.—(*Bulletin Général de Thérapeutique.*)

MEDICAL INTELLIGENCE.

NEW MEDICAL JOURNALS.—We have received the first four numbers of the *Missouri Medical and Surgical Journal*, a new periodical, which is published in St. Louis, under the editorial management of R. T. Stephens, M. D. These numbers give evidence of a degree of enterprise and professional ability highly creditable to our brethren in the far West. The Journal is published in monthly numbers, each containing 24 pages. Price two dollars per annum.

We have also received the four numbers of *The Buffalo Medical Journal*, a monthly periodical of 24 pages, published in Buffalo, N. Y., and edited by Austin Flint, M. D. The original department contains a number of useful articles, and affords proof that there is in that section "sufficient material to commence an enterprise of this kind." Although, from the location of Buffalo, this Journal will come into close competition with some of the older, and established medical periodicals, the field is large enough for many laborers, and we doubt not the ability of the physicians of Western New-York, to perform their part, in the cultivation of the Medical Sciences—and establish a Journal of high character.

Our valued cotemporary, the *New Orleans Medical Journal*, comes to us with a new name—*The Louisiana Medical and Surgical Journal*, and with the addition of Profs. Harrison and Carpenter to the Editorial department. These changes have resulted from a union of the *New Orleans Medical Journal*, with projected work, under the direction of the Professors just named. We doubt not that this union will prove highly advantageous, as it will enlist the whole profession in that section in its support. The ability with which this Journal has been heretofore conducted, and the valuable accession to its Editorial department, which it has just received, will most certainly secure for it an extensive patronage. We most cordially wish it success. The work is published every other month, in numbers containing 144 octavo pages,—at five dollars per annum, payable in advance.

NECROLOGY.—The death of M. Breschet, one of the Professors in the Faculty of Medicine at Paris, &c., &c., is announced in the French Journals as having taken place on the 11th of last May. He was one of the most industrious and honorable of the Surgeons in the French Capital.

The fortune left by the late Dr. Abercrombie of Edinburg, was \$50,000 to each of his seven daughters, besides a considerable sum to the free Church of Scotland, of which he was an Elder. His family presented his library, consisting of 0,000 volumes, to the Royal College of Surgeons of Edinburg.

AN INSTRUMENT DESIGNED FOR THE PERMANENT CURE OF HERNIA, HYDARTHROSIS, HYDROCELE, GOITRE, ENCYSTED TUMORS, AND TO DEPOSIT MEDICINES IN THE ISSUES OF THE BODY.—From the favorable opinion expressed by a few friends in regard to the Instrument, a cut of which may be seen on the opposite page, I am induced to offer it with a few remarks to the profession.

It is known that for the past eight or ten years, considerable attention has been bestowed on the subject of hernia. That the interest is not yet exhausted, and the matter still *sub judice*, may be seen by the following question proposed for the Boylston medical prize for 1847—"Is there any safe and certain operation for accomplishing the cure of common reducible inguinal hernia?"

The recent investigations upon this subject have resulted, I believe, in the pretty general adoption of some modification of the Truss, first proposed by Stagner, (Chase's or Landis's for instance,) and the rejection of any operation for the permanent cure of hernia. The dread of peritoneal inflammation, the occasional success of the Truss, and the affection being considered simply an inconvenience, have induced great caution in the adoption of an operation not absolutely required. While a properly adapted apparatus is the correct treatment for rupture in children, and sometimes relieves the adult, still we can with no certainty promise a cure by it in the latter. To effect this we must resort to other means.

That even reducible hernia is something more than an inconvenience to patients, and that the Truss is but a palliative treatment, the many suggestions made, and operations proposed within the few past years, sufficiently attest. Some of these are, (Belmas,) by bladders of gold-beater's skin, sticks of gelatin, &c., deposited in the sac; (Gerdy,) by invaginating the skin and stitching it

A NEW INSTRUMENT—THE UNION OF THE SYRINGE WITH THE TROCAR.



1. Gold canula pierced with the stilet, which is as pointed as a needle.
2. Thumb-screw to fasten the stilet, and close the orifice in the piston when the stilet is drawn out.
3. Nob to remove the stilet.

[This cut represents half the size of the Instrument made for me by Mr. Murphy, Jeweller of this city.]

about the neck of the hernial sac; (Guerin and Velpeau,) by subcutaneous incisions and scarifications of the neck of the sac; (Bonnet,) with pins and rolls of linen; (Jameson,) by incision and intrusion of a piece of integument into the ring and retaining it by sutures; (Stith,) incision and insertion into the sac of a piece of kid or buck skin softened in mucilage; (Pancoast,) by trocar and injected fluid. Of these means, that by injection, from the uniform success experienced by it in hydrocele, would seem to merit most favor—the objection to the operation being the want of a suitable instrument, for Prof. Pancoast used a trocar, canula and syringe.

Having been recently consulted by a physician, who had been under the professional care of Professors Dudley and Geddings, and who was ready, as he stated, to submit to any operation, I had concluded to propose to him incision of the sac. A few days after this, Dr. Wozencraft, of Nashville, Tenn., called, and exhibited a small syringe, invented and patented for the cure of hernia, by a Dr. Jaynes, formerly of Virginia, but now of Missouri. This instrument is simply the upper part of a common silver pencil case, having a piston adapted to one end, and the other terminated in a gold pointed canula. An eye or opening near the point, allows the fluid to be injected into the sac after the hernia is reduced. Dr. W. prefers oil of cloves, from three to six drops is the quantity generally introduced, and he says that though hundreds of cases have been operated upon by the inventor and his agents, still no unpleasant consequences have followed. The operation requires repetition in some instances, and he also acknowledges that the spermatic cord has been punctured. His case operated on here, is doing well, and promises success; and so is the one upon which I have operated.

As a substitute for the patented Instrument, the one represented by the cut is suggested, and it may have some advantages over it.

1st. Not being patented, it may be used by every physician.

2d. The point being moveable, there will be no danger of wounding other parts, in ascertaining when the canula is in the hernial sac.

3d. The Syringe being of glass, the action of the piston upon fluids, either in injecting or withdrawing them, can be seen.

4th. It may be employed as an exploring needle, to ascertain the contents of tumors, &c.

5th. The canula opens at the extremity and not at the side of the instrument.

6th. In its application to various affections. In hydrocele, for example, a puncture having failed to cure the patient, as soon as a re-accumulation commences, half-a-drachm of tinct. iodine may be injected. I believe the very last suggestion for this affection, was to pencil the tunica vaginalis through the canula of a trocar with this article.

Operation with the Instrument.—Fill the syringe with the injecting fluid, by withdrawing the piston. Project the point of the steel stilet beyond the gold canula, and fix it by the thumb-screw in the handle, or ring of the piston. Place the patient in the horizontal position, reduce the hernia for instance, then with the fore-finger of the left hand invaginate the skin of the scrotum and spermatic cord into the abdominal canal. The instrument held as a writing pen, in the right hand, is introduced from above downwards upon the tip of the left fore-finger. The stilet is now withdrawn, the canula ascertained to be in

the sac, and the piston pushed home into the syringe. A Truss ought previously to be well fitted to the internal ring. The patient should be confined for a day or two, and the Truss unremittently worn for a month. The fluid I should select is diluted tinct. iodine, and the quantity, which of course must vary, about 1a.

The new principle, if indeed it be novel, is simply the union of the syringe and trocar in the above described instrument.

Since the above was devised, Dr. A. L. Hammond of this city, one of our recent graduates, has suggested the addition of a spiral spring to the stilet, by which after the introduction of the canula, it is withdrawn, and the piston is once pushed down in the syringe.

PATR. F. EVL.

METEOROLOGICAL OBSERVATIONS, for August, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west Wash. Altitude above sea
152 feet.

DAY.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sunrise.	4, P. M.	Sunrise.	4, P. M.		
1	64	90	29 74-100	29 80-100	S. E.	Variable—rain at 10, P. M.
2	73	82	" 88-100	" 87-100	N. E.	Cloudy. {sprinkle to-day.
3	66	74	" 85-100	" 86-100	E.	Cloudy—rain last night.
4	64	75	" 85-100	" 85-100	E.	Cloudy—sprinkle.
5	65	72	" 79-100	" 79-100	N.	Cloudy—sprinkle.
6	65	84	" 79-100	" 79-100	N. W.	Fair.
7	64	90	" 80-100	" 80-100	S. E.	Fair—breeze.
8	69	90	" 82-100	" 82-100	S. E.	Fair, do.
9	70	89	" 82-100	" 82-100	S. E.	Variable—a few drops rain.
10	73	92	" 82-100	" 75-100	W.	Fair—Blow at night.
11	72	88	" 70-100	" 62-100	W.	Cloudy—blow at 4, P. M.
12	70	93	" 64-100	" 68-100	W.	Cloudy.
13	70	90	" 78-100	" 74-100	S. E.	Showery.
14	71	92	" 80-100	" 76-100	W.	Fair.
15	73	95	" 76-100	" 76-100	S. W.	Fair.
16	73	96	" 76-100	" 73-100	W.	Fair—breeze.
17	72	85	" 76-100	" 76-100	W.	Cloudy—thund. & light.
18	72	92	" 74-100	" 68-100	W.	Fair—breeze.
19	72	94	" 77-100	" 67-100	N. W.	Fair—breeze.
20	72	90	" 68-100	" 66-100	N.	Light shower.
21	70	86	" 66-100	" 62-100	S. W.	Shower.
22	68	90	" 68-100	" 67-100	N. E. & S.	Fair.
23	70	78	" 78-100	" -100	S. W.	Showery—thund. & light.
24	70	90	" 81-100	" 78-100	W. & E.	Fair—thunder & lightning.
25	72	88	" 81-100	" 75-100	S. E.	Rain—th. & light. at 3, P. M.
26	70	83	" 83-100	" 75-100	S.	Do. do.
27	70	85	" 75-100	" 73-100	S.	Cloudy—light shower.
28	70	85	" 79-100	" 73-100	S. W.	Do. do. do. to-day.
29	70	76	" 81-100	" 80-100	S. E.	Cl'y—rain last night—spr.
30	70	80	" 80-100	" 74-100	S. E.	Cloudy—sprinkle.
31	70	88	" 75-100	" 75-100	S.	Fair.

12 Fair days. Quantity of Rain, 3 inches and 4-10.

ERRATA—Notwithstanding all our care, several errors, we regret, have been detected in the 1st Article of this No.

On page 550, 14th line from top, read *equable* for *agreeable*.

" " 551, 9th " " bottom, read *unusual* for *annual*.

" " 553, 3rd " " bottom, read 1824 for 1844.

" " 555, 16th " " top, read *causes* for *causes*.

" " 560, 4th and 5th lines, put period after the word *diet*—change semi-colon to comma, after the word *aid*, and efface the word *and* before *rarely*.

On page 567, read *procumbens* for *punctatum*.

We are responsible for the translation of the Greek and German of this Article.

SOUTHERN MEDICAL AND SURGICAL JOURNAL.

Vol. I.]

NEW SERIES.—NOVEMBER, 1845.

[No. 11.]

PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

Case of Tetanus, continuing thirty-four days—Recovery.—With Remarks. By J. P. STEVENS, M. D., of Liberty County, Ga.

On the 6th April, I was called to see Fanny, a negro girl, about eight years of age, who, for about twelve hours previous to my visit, had been suffering from slight paroxysmal attacks of pain, and contraction of the muscles of her abdomen and back. Her eyes were natural and bright; respiration easy; no fever; tongue a little red at the edges, with a whitish fur in the centre; slight pain in her bowels, and a moderate contraction of the dorsal muscles; bowels torpid.

Prescription.—Apply sinapisms to her extremities, and to the whole length of her spine; \mathfrak{z} i. castor oil.

April 7th. Fanny's condition this morning is evidently worse in every respect. The muscles of her back are rigidly and permanently contracted, causing her body to assume a semilunar form; deglutition is almost impossible; at intervals of fifteen minutes there is forcible contraction of all the muscles of her body; the angles of her mouth are violently retracted, causing that peculiar aspect of countenance indicated by the term *risus sardonicus*; her teeth are firmly set; the muscles of her abdomen are as hard and resisting as a board, and her extremities are firmly flexed. When interrogated with regard to pain, she refers us to the umbilical and epigastric regions. This state of things continues for about a minute or two,

when there is *comparative* relaxation of the muscles concerned in deglutition, as well as those of the abdomen and extremities. During the paroxysms, a profuse perspiration bathes the cutaneous surface. Oil operated twice; skin of natural temperature; pulse 90; respiration 30.—*Pres.* Tinct. camphor, tinct. opii., *aa* 20 gr.

4, P. M. No change.

R. Calomel,	}	M.
Nitr. potass. <i>aa</i> 20 grs.		
Opium, 2 "		

Divide into two parts, and give at an interval of two hours. Expectoric three inches wide, to be applied from the occiput to the sacrum.

April 8th. Powders operated copiously, bringing away one or two lumbrici; blister drew well.—*Pres.* Tinct. camphor, 3i.; tinct. opii. 3ss. In the afternoon, 10 grs. calomel; and 25 grs. laudanum to be taken at night.

April 9th. No change in symptoms; bowels moved with assistance of an enema.—*Pres.* Turpentine enemata, at intervals of 12 hours; sponge the body with hot brandy and vinegar.

April 10th. Bowels evacuated of a very black offensive matter. Blister upon the spine still continues sore; spasms recur much more frequently.—*Pres.* ʒi. castor oil, sinapisms to extremities; ʒi. Dover's powder, morning, noon, and evening.

April 11. Slept well during the whole night, spasmodic pain recur but seldom; skin moist; pulse 108; thirst moderate; abdomen soft, but bowels not moved by oil; *lying upon her back*.—*Pres.* Castor oil, ʒi.; oil terebin. 3ss. Mustard poultice to abdomen.

April 12th. From this time, her master, Dr. Jos. Le Cat, visited her regularly with me. Since last report, Fanny has passed three worms.

There is still *constant* rigidity of the dorsal muscles, and general spasms occur four or five times during the morning, which are provoked by the slightest touch or mental emotion.—*Pres.* Decoct. spigalia; blister to thighs.

April 13. Rigidity of muscles of lower jaw so great as to preclude the admission of any liquid. Spasms more frequent; pulse 110; skin natural.—*Pres.* Tinct. opii. 3i.; frictions over the spine with turpentine and tinct. cantharides; 10 grs. calomel, to be divided into two parts—take them at an interval of two hours.

April 14. Bowels moved three times; the first very dark and offensive; voided two worms. Spasms frequent, but of transient duration.

April 15th. Countenance much better; indications more favorable.—*Pres.* 3ss. turpentine, ʒi castor oil; re-apply blister to spine. As it is unnecessary for me to continue a narration of the symptoms and treatment of this protracted case, I will only remark, that anthelmintics, derivatives to the spine, and opiates, were continued with very decided advantage. Five worms were brought away multaneously, soon after which, her countenance assumed a calm and natural aspect; all the secretory functions of the economy were discharged normally; the respiration and circulation perfectly natural, but spasmodic movements of the abdominal, dorsal, and the muscles employed in deglutition, recurred at regular intervals, the attacks of each succeeding day diminishing in force and frequency, until they finally ceased entirely.

During the last two or three days of our visits, we prescribed ʒ6 grs. sulph. quinine, divided into six parts, one of which was administered every fourth hour, but we did not observe any very marked benefit to follow its employment. The warm bath, which is always a valuable adjuvant in spasmodic diseases, could not be employed, save in the recumbent posture; and as the facilities for making use of such remedies are rather *meagre* upon a *plantation*, we were compelled to defer its trial until the patient could tolerate the erect posture.

On the 10th May, I see noted, that "Fanny is this morning sitting up alone; muscular contractions have ceased, with the exception of occasional *twitches* during the day." She is at this date, Aug 15th, perfectly well.

REMARKS.—There is perhaps no disease to which the human frame is subjected more to be dreaded, not only from the excruciating agony which is endured by its victims, but the almost certain fatality which marks the progress of tetanus. It heeds not the tenderest sympathies of our nature, and has persisted invincible against the united power of the most gigantic intellects, from the time of Hippocrates, down to the present day. Another feature which mantles it with horror, is the extremely trivial nature of the cause which often induces its attacks. Lacerated and punctured wounds, principally of the extremities, of tendons and ligaments, may be classed among the most *ordinary* causes of the disease. "Tetanus has been occasioned by a bite on the finger from a tame sparrow, the stroke of a whip-lash under the eye, although the skin was not

broken, a fish-bone sticking in the pharynx, a seton in the chest, the stroke of a cane on the neck and hand, flagellation, extraction of a tooth, cupping and venesection, &c., &c. It has also followed severe fractures, lacerations, contusions, punctures, amputations, excision of the mamma, tying arteries, gunshot wounds, castration, injection for hydrocele, &c., &c.—(J. H. Bennet. *Tweedie's Library of Pract. Medicine*, p. 71.)

The case which we have just reported, was doubtless occasioned by the irritation of worms in the alimentary canal. Although, during the whole course of the disease, there were but eleven worms discharged, still at every evacuation of these troublesome parasites, a manifest improvement in the general symptoms supervened. Many writers regard worms as almost the only cause of tetanus. How often it is, that almost incredible numbers of them have been voided without previously having excited little or any constitutional disturbance. I was informed, not long since, of an instance which occurred in this county, where a little negro passed, per rectum, upwards of seven hundred worms, in the course of two days, without having suffered any inconvenience, with the exception of a moderate pain in the bowels! Any irritating substances in the stomach and intestines, such as indigestible articles of diet, indurated fæces, &c., are not unfrequently exciting causes of tetanus. I recollect in the practice of Dr. B. B. King, six years since, of having seen a case terminate fatally, from intussusception. The subject was a negro boy, about 9 years of age, who was attacked in the morning while pursuing his usual routine of labor; and notwithstanding a most energetic and judicious course of treatment was vigorously pursued, he died in the course of twenty-four hours. Constipation of the bowels was an insuperable obstacle in the management of his case, and upon post-mortem examination, the doctor discovered an intussusception of about three inches of the ileum. There was no wound or external injury discovered upon any part of the body, save a superficial abrasion of the cuticle, of about three lines in length, which did not, at that time, or previously, excite any attention.

Vicissitudes of temperature are among the most common causes of the idiopathic form of this disease. Sudden alternations from heat to cold, exposure to rapid currents of air, while in a perspiration, have induced its attacks. A few weeks since, a gentleman informed me, that his father lost a negro woman who had aborted in about the sixth month of her pregnancy, and was doing very well, when

"she took cold," a tetanus supervened. The first case of tetanus which Dr. Dunglison ever observed, was caused by a suppression of perspiration. "A young man, when in a profuse perspiration, went into a river to bathe. He was immediately struck with tetanus, from which, however, he recovered."—(*Dunglison's Pract. Physic*, vol. 2, p. 329.) Dr. Chalmers gives an instance, where it was brought on by sudden change of weather, in a man who slept without his night-cap.

A high degree of temperature is said to predispose to this disease; hence the extreme liability of the system to its attacks, when a very hot season is followed by much cold and wet weather. "Thus it is stated, that after the battle of Muskow, in the midst of great heats, very few of the French troops were attacked with tetanus: whereas, those who were wounded in the battle of Dresden, when the weather was cold and wet, just after a very hot season, were decimated by that complaint."—(*Watson's Pract. of Physic*, p. 311.) I think we may venture the opinion, that negroes are much more liable to this complaint than whites. This fact may, in a measure, be attributed to the frequent exposures to which they are subjected, not only to changes in the weather, but irregularities in diet, and bodily wounds which are accidentally received.

The *pathology* of tetanus is involved in some obscurity, although, from searching into the results of the post-mortem observations of others, I am inclined to the belief, that the spinal marrow and its afferent nerves may be regarded as the seat of this disease. *Inflammation* of the spinal chord, and its nerves, is not discovered in every case, but the phenomena observed during life, refer to derangement of the *excito-motory* division of the nervous system. The intellect is unclouded during the whole progress of this malady. Consciousness of danger, and a perfect knowledge of surrounding objects and circumstances, render the condition of the patient peculiarly deplorable. He feels the omnipotent grasp of the monster, and is fully aware of his almost inevitable dissolution.

Dr. Marshall Hall, in his work upon the nerves, p. 57, declares his belief, that the whole order of spasmodic and convulsive diseases belongs to this, the true spinal, or excito-motory division of the nervous system, and that they cannot be understood without a previous accurate knowledge of this system. His experiments, showing the independent action of the spinal marrow and its nerves, in the production of certain phenomena, are highly interesting. After decapitation,

and otherwise removing the influence of the brain, certain muscular movements were provoked by the application of appropriate irritants, which he found impossible to accomplish, when the spinal medulla was destroyed. Upon severing the head of a turtle, and exposing the spinal nerves, and pinching one of them with the forceps, violent contraction of the muscles ensued, not only of the parts supplied by the irritated nerves, but of those situated above and below this point of junction with the chord.—He proposes to divide tetanus into centric and eccentric. When the irritating cause affects the parts within the spinal canal, he denominates it centric; a punctured nerve, lacerated wound, or other injury, produces eccentric tetanus. When we observe the spinal marrow inflamed, with the co-existence of tetanic spasms, we refer the phenomena to centric irritation; when intestinal irritation, and injuries of any kind, are followed by spasmodic contractions, even though upon post-mortem examination no decided evidence of *pre-existing inflammation* can be discovered, we fairly ascribe the symptoms to eccentric irritation.

Dr. Gerhard declares, that he has examined “the brain and spinal marrow of ten or twelve subjects dead of tetanus, and could not discover any traces of organic lesion; no softening of the spine, or inflammatory congestion, beyond what is discovered in bodies where no spinal symptoms evinced themselves before death.” But admitting the accuracy of his observations does not disprove the previous existence of a high grade of *irritation*. How often do post-mortem researches reveal the entire absence of any morbid lesion of structure, where, during the life of the patient, we were certain of a high degree of abnormal action. But let us refer to the testimony of others. “The spinal chord usually evinces manifest congestion, both in itself and its membranes; more especially at the origin of the nerves, and the amount of the serum is preternaturally and considerably increased. In the traumatic form, it is in the nerves of the part that inflammatory change is to be looked for—not in the spinal chord; for the disease is to be regarded as an *extreme* example of *irritation* in the whole spinal system, induced by inflammatory products in some portion of its system.—(*Miller's Principles of Surgery*, p. 474.) Alterations in the spinal chord and its membranes, are by far the most common appearances found in tetanus, and in such cases there have generally been traces of spinal meningitis. These instances are too numerous to be spoken of individually. Several have been recorded by Reid, Kennedy, Brayne, and others, in Britain; Larrey,

oussais, Magendie, Recamier, Ollivier, and others, in France; Argamaschi, Brera, Bellingeri, Uralli, Poggi, in Italy; and Frank, Junk, &c., in Germany. In some cases, the inflammatory appearances were more or less diffused over the spinal chord; and in others, recorded by Ollivier, Pelletier and Curling, they were limited to particular portions of it.—(J. H. Bennet.) Tetanus is evidently dependent upon a state of undue excitability of the whole spinal system, and this may be produced by different causes. That which is termed the idiopathic form of the disease, has its origin in the centres; it may result in man from the operation of various predisposing and exciting causes, and may be produced in animals by the operation of strychnine.—(Carpenter's *Human Physiology*, p. 217.) In an interesting case of tetanus, given by Dr. Reid, in the Transactions of the Association of Physicians in Ireland, vol. 1, p. 113, great vascularity, and an effusion of blood, were found around the spinal marrow. In another case, detailed by Mr. Brayne, of Banbury, in the London Medical Repository, vol. 14, p. 1, two or three inches of the inferior dorsal portion of the spinal marrow were suffused by a continuous blush of inflammation, and three small, white, hard laminæ were seen between the arachnoid and pia mater.—(Hall, *on the Nerves*, p. 214.) Here then we have the evidence of some of the most distinguished pathologists and physiologists in confirmation of the pathological views which we entertain. If they be correct, the indications of treatment are obvious. It was the opinion of Hippocrates, that tetanus supervening upon a wound is mortal, and statistical records of the present day lead us to infer, that the number of those who die from its attacks is incomparably greater than those who survive. Of two hundred cases of tetanus which came under the observation of Dr. O'Beirne, not one recovered. Sir J. McGregor saw several hundred cases, and but very few recoveries. Sir G. Blane mentions that three out of twenty recovered that occurred in the West Indies, after the battle of April, 1782. Of thirteen cases witnessed by Mr. Dickinson, Surgeon at Grenada, four were cured. (J. H. Bennet.)

In prescribing the treatment, it is unnecessary to notice the effects of every remedy which has been employed by physicians, but merely to refer to those which seem to be most imperiously demanded. In conformity with the benevolent principle inculcated by Prof. Ford, that the *mitigation of pain*, is the first consideration which ought to engage the attention of the practitioner, the differ-

ent preparations of opium may be considered as indispensable adjuvants. But, I apprehend, that injury has been incurred rather than benefit, from the inordinately large quantities of opium which have often been forced into the stomachs of patients. It is stated that Mr. Abernethy found *thirty drachms of undissolved opium* in the stomach of a man who died of tetanus; and that four pounds, seven ounces, and six drachms of laudanum, and six ounces, six drachms and forty-five grains of solid opium, were administered to a patient in ten days. Such a course of treatment may in a measure account for that degree of constipation of the bowels which is so often deplored. When called to a case of tetanus, we should enquire first into its cause. If the symptoms be dependent upon cerebral irritation, induced by a sudden check of perspiration, sudorifics should be perseveringly employed. Much vascular excitement should be met with general and local blood-letting, more especially, if there be evidence of spinal engorgement. Blood should be abstracted from the arm until an impression be made upon the pulse, to be succeeded by the abstraction of twelve ounces from the spine—*practicable*, by cupping; if not, by leeches. We are told that in one case which recovered, M. Lisfranc bled 8 times, and applied 72 leeches to the spine. Sixty gtt. of laudanum every hour, to be gradually increased in quantity, until some appreciable influence is exerted upon the system, will tend to assuage the agonizing pains of the sufferer. Calomel, in combination with opium, given in sufficiently large quantities to purge freely, may act beneficially, not only by dislodging any irritating substances, in the form of vitiated secretions, or accumulation of worms, but by its revulsive influence. A vesicatory three inches wide, extending from the occiput to the sacrum, should be applied immediately after the acute symptoms have subsided in a measure, and repeated sufficiently often to keep up a sufficient irritation. The warm bath should not by any means be forgotten, for its effects are sometimes astonishing in relaxing the cutaneous emunctories, and overcoming spasmodic rigidity. Should eccentric tetanus be caused by the presence of worms in the intestines, \mathfrak{z} i. turpentine, and the same quantity of castor oil, should be given at once, to be repeated in two hours, if necessary, and assisted by enemata. In case of the failure of this prescription, two drops of croton oil, with one drachm of turpentine, will generally prove effectual. We are amazed at the great quantities of drastic purgatives which are sometimes endured by the constitution. "Dr. Briggs has

recorded an almost incredible case (*Edin. Med. and Surg. Journ.*, vol. 6, p. 141,) in which, in forty-eight hours, the patient took 210 grains scammony, 89 grains gamboge, one ounce and four scruples of jalap, two pounds and a half of infusion of senna, and 8 grains of calomel, with decided benefit!" The nature of the wound in traumatic tetanus, should be carefully observed. If a foreign substance exists, it should be immediately removed. It is frequently necessary in cases of punctured and lacerated wounds, to dilate the orifice by deep crucial incisions, for the purpose of encouraging hæmorrhage from the part, and relieving the excessively painful distension. Complete section of a partially divided nerve has been practiced by some, but with little success. With regard to amputation of the wounded limb, I am impressed with the conviction, that when tetanic symptoms have fairly supervened, the records of surgery will scarcely warrant such cruel interference. The disease having fairly commenced, is very rarely influenced by any local treatment to the offending part. "Tetanus is one of those diseases which renders null the axiom"—*'sublata causa, tollitur effectus.'* "It would be as vain to hope to cure rabies by amputating the bitten finger; constitutional cancer, or syphilis, by removing the local disease, as to expect to cure tetanus, after it had set in, by removing the limb."—(Dupuytren's *Surgery*, p. 548.) It becomes a constitutional disorder, and our remedies must be directed accordingly. The use of mercury carried to salivation has been extolled by many, as possessing peculiar charms in controlling this disease.

Should deglutition be impossible in the use of medicines, we must inject large quantities into the rectum, and employ inunction upon a vesicated surface.

It would require a volume to enter into a narrative of the effects produced by the different powders, pills and tinctures, which have been employed by different medical men. Suffice it to say, that antimony, prussic acid, tobacco, brandy, musk, quinine, phosphorus, electricity, strychnine, ether, stramonium, colchicum, the preparations of iron, digitalis, &c., have been employed to an unlimited extent, and neither one, nor all combined, have exerted any very remarkable curative influence. The vapor bath and cold affusion have borne no better testimony to the curability of this disease. We have already remarked, that the Ancients regarded an attack of tetanus as *necessarily mortal*; and as at the present day we do hear of occasional recoveries, we are encouraged with the hope, that ere long, the

unprecedented advances which are now being made in the Sciences of pathology, physiology, and chemistry, in elucidating the hidden mysteries of organism, will place even tetanus in subjection to the magic influence of the "Divine Art."

ARTICLE II.

Thoughts on Syphilitic Ulcers—their treatment, &c. By ROBERT EDMONDS LITTLE, M. D., of Quincy, Middle Florida.

Opinions in regard to the origin, nature, and progress of diseases arising from impure coition, are not more numerous and directly opposite in character, than those maintained by the profession in relation to their treatment: opinions which not unfrequently yield to the scrutiny of experiment—not, however, without first entailing much difficulty on those who have been so unfortunate as to place too great a reliance on any specific mode of cure, modified by peculiarity of constitution. Notwithstanding the partiality of many for the antiphlogistic treatment of syphilis, and the general concession that mercury is a specific against its ravages, our principles want stability, for neither the non-mercurialists, nor their opponents, are guided by any fixed or definite standard. As a consequence, cases are daily met with which being thought amenable to mercury alone, have been rendered truly deplorable by a too free use of the article—while others are immolated at the altar of fear, from a supposition that the remedy inflicts on the system evils, scarcely less to be dreaded than the disease for which it was given. We do not propose at this time to present any thing like an elaborate notice of syphilitic ulcers, or their peculiar treatment;—for this, our means of observation have been too limited, removed as we are from an extensive field for a thorough investigation of the subject. We design to produce observations not presented in the illimitable field of speculation, but the result of cases seen. In our conclusions, we have been uninfluenced by preconceived opinions, or *ex cathedra* assertions, well knowing how little reliance there is to be placed in assertions and theories, when not backed by facts. All, however, are not destined to look through the same medium—hence, in a great measure, the conflicting evidence of different individuals, not only in

regard to medical, but all other subjects, plain and intelligible though they be to the unprejudiced.

In the July number of the *Western Lancet*, Dr. E. L. Dudley devotes several pages to a consideration of diseases resembling syphilis. Dr. D. seems to have been a close observer of the treatment pursued by the Professor of Surgery in Transylvania University, in the numerous cases presented for cure; and the conclusions to which he has come—if we do not misapprehend his meaning—are, that all ulcers on the genital organs, save the true Hunterian chancre, are to be regarded as not syphilitic, and consequently not requiring mercury for their removal: conclusions which we apprehend will not be adopted by a very large number of the profession. To differ upon subjects purely speculative, is allowable among men; but for a difference to exist between those who are capable of observing with regard to facts, is contrary to reason, and can be accounted for upon no other principle, than that of one or both parties at issue, are led astray by a partiality for opinions adopted without a sufficient examination, and maintained on account of the ancient relationship existing between these opinions and their supporters. It has been, and still continues to be too much the fault of medical men to receive the dogmas of those who rank high in the profession, without taking upon themselves the trouble of investigating them, and relieving themselves from the errors into which they have been led by their sacred authority. From the time that John Hunter's work on the Venereal Disease first appeared, his authority has generally been deemed supreme, and his followers blinded by his errors. Following in his footsteps, they regard the ulcer so well described by him, as the only one legitimately venereal; thus lessening the number of cases of pox so greatly, as to cause one to imagine that the disease had almost disappeared from the long list of those to which flesh is heir, were it not for the deformed faces and altered voices so often encountered.

From the opinion of Dr. D. we beg leave to dissent. No one form of ulcer is exclusively to be taken as an index of syphilis—they are as numerous almost as the hues of the chameleon, and he who undertakes to diagnosticate the disease, or the reverse, as the ulcer may, or not, present the characteristics of the Hunterian chancre, will, in a majority of cases, fail, and suffer the mortification of having patients return to him after a few months afflicted with secondary symptoms in all their virulence. Syphilitic ulcers appear isolated and in clusters, with and without indurated bases, and present all the

numerous varieties from a healthy to a sphacelated ulcer, whether they be seated on the genitals or in the throat. Like Dr. D., we were taught to regard a majority of these as the result of irritation, requiring for their removal a simple antiphlogistic treatment. Fully impressed with the truth of this doctrine, we acted upon it, and gave it up only when convinced of its futility, and of the injurious consequences attendant upon it. Ulcers on the glans penis, and other parts of the genitals, were, in the beginning of our practice, treated by us as pseudo syphilitic, by mild aperients, and absence from all general and local stimuli, but without in the least benefitting the patient. When suffered to remain untouched, for the purpose of having our "doubts enlightened," we were not unfrequently mortified by the appearance of syphilitic peoriasis and lepra, symptoms similar, we presume, to those attributed by Dr. D. to the use of corrosive sublimate. From his statement, it is to be inferred that secondary symptoms never supervene upon any other, than the true Hunterian chancre. Here we are at issue. We have been more unfortunate than he has—our success less signal than his. How to reconcile these conflicting statements we know not, both being made in good faith.

Dr. Dudley says, "the enquiry may be made, does a syphilitic chancre ever secrete pus—and is not the fact of a chancre having commenced to form purulent matter to be considered evidence that the disease is mastered, and that healthy granulation is about to take place?" We unhesitatingly affirm that it does not unfrequently secrete pus. Several months ago, a young man consulted us, in relation to an ulcer on his glans penis with an elevated border, concave, and discharging a considerable amount of *uniformly consistent cream-colored pus*. Our advice was not adopted, as we recommended a mercurial course. Three months afterwards he returned, and placed himself under our care for the removal of a long train of secondary symptoms. We have every reason to believe that they would not have manifested themselves if our advice had been adopted. Similar cases might be multiplied almost ad infinitum.

Dr. D. considers the Hunterian sore the only index of the existence of primary syphilis—hence the diagnosis between true and bastard syphilis is easy. Ricord says, "no affection is so ill defined, and no diagnosis so uncertain" as that of syphilis. But doctors as well as philosophers will disagree. With a majority, the matter remains in doubt—and until the diagnosis is understood—safety can

only be ensured by a judicious use of mercury; yet in avoiding Scilla, let us not run on Charybdis.

The case of the medical student reported, is defective in description—the ulcer is described as being “a long, narrow, superficial affair”—yet notwithstanding the omissions, it is fair to presume that the ulcer was legitimately syphilitic, and that the dangerous symptoms were the result of the injudicious treatment pursued. In its early stages, a light regimen, gentle purgatives, and cleanliness, adopted for the space of two or three days, failed to improve its appearances. Becoming dissatisfied at the progress made, he consulted a second physician, who advised a mercurial course; the sore increasing in size, a third was visited, and he in turn considered the use of mercury necessary. Blue pill and opium caused “profuse salivation, and threw the bowels into a state of excessive torpor.” The ulcer spread, and an inguinal gland suppurated, and exposed a foul ulcer as large as the palm of a man’s hand. The glans penis was destroyed, and the scrotum covered with ulcers. Professor Bush was now consulted—all medicine was suspended—a mush poultice was kept constantly applied, and a light nutritious diet adopted. Under this course, the patient recovered in six weeks, with the loss of the glans penis. He was afterwards operated on for phymosis by Prof. B. The “dangerous extremity to which he was reduced,” is attributed by Dr. Dudley, to the “improper employment of mercury.” So far we agree with him. The sore is recognized, although the description is vague. The ulcer, from its situation we presume, commenced on the glans penis in the form of a vesicle, which finally assumed the characteristics mentioned. We have met with two cases similar to the above in almost every respect, and producing like it, phymosis. The ulcerations succeeding vesicles discharged a large quantity of purulent matter, and inoculated the neighboring parts, including the scrotum, which in each case was covered with a crop of pustules scattered over its entire surface. Unlike Dr. Dudley’s case, they were treated without the use of mercury—secondary symptoms in both cases supervened. In our cases, “the dangerous extremity” to which our patients were reduced was certainly not to be attributed to that disease producing remedy—mercury.

We have said that the ulcer on the glans penis of the student was in all probability syphilitic—and we now add that the violent symptoms produced, as well as the cure, were the result of the mercury

administered—injudiciously as it was. The propriety or the reverse of the administration of mercury in the treatment not only of syphilis, but all other diseases, should be based on the peculiar state of the system of the individual for whom it is prescribed. Preparatory treatment should in all cases be resorted to, and to an observance of this precaution, is in a great measure to be attributed the success of our fathers in the management of venereal diseases, as well as the great length of time that elapses between the cessation of the treatment of the non-mercurialists and the appearance of secondary symptoms. No practice is more injurious, or likely to do harm, than that of giving mercury for the cure of a venereal ulcer, simply because the former is deemed a specific for the latter, without first investigating the condition of the general health of the patient, which should always be prepared for the proper use of that remedy. We could adduce instances of young, robust men, having their constitutions impaired to a serious extent by an injudicious prescription of mercury which acted on the salivary system—but instead of healing the ulcers, only tended to enlarge them—thus disappointing the hopes of the physician in regard to a speedy cure. Such a case no doubt was that of the student of medicine. Had he been bled, purged, and subjected to a meagre diet for a week or ten days prior to the commencement of the mercurial course, by which means the inflammatory condition of his system would have been reduced, the ulcer would in all probability have disappeared in a short time—the patient would not have been reduced to a dangerous extremity, and Prof. Bush not compelled to doubt the correctness of the diagnosis of the physicians who deemed the ulcer truly venereal. Dr. Dudley properly observes, that the alterative doses of blue pill and opium, induced mercurial erethism; thus substituting one disease for another—converting the venereal, into a mercurial sore, after which a withdrawal of the mercury, and the use of a generous diet, were all that was necessary to relieve him, of a disease which at first was an ulcer—“long, narrow and superficial.”

In urging the necessity of preparatory measures, we do not mean that depletion is in all cases to be used. Individuals vary as much in their habits and constitution, as do syphilitic ulcers. We must be guided by the condition of the patient and appearance of the ulcer. In America, where venereal patients are usually in the beginning hardy and robust, depletion is rarely required to prepare the system for the beneficial influence of mercury. In the hospitals of Europe,

reverse is true; hence the value to surgeons of the advice of John Hunter, who said, "I think no kind of diet has any effect in retarding the cure of syphilis, and I think a man would get equally as well if he lived ever so luxuriant, got drunk every day, and slept in the fields." To a certain extent, Hunter was right—his advice should be followed only in cases of debility, either from previous dissipation or the inordinate use of mercury.

To surgeon Rose, of the Cold-stream Guards, is due the credit of having introduced to the notice of the profession the fact that syphilis in all its stages could be cured without mercury; his announcement was accompanied by reports of numerous cases so relieved. The retensions of the anti-mercurialists we do not intend examining, as it is conceded that instead of advancing in popularity, they are losing ground. A majority of the cases reported by him and his followers, among whom may be mentioned M. Guthrie, Dr. Green, and others (equally distinguished,) as cured finally, had secondary symptoms—such as had not, are considered by Dr. Dudley (in his attempt to limit the number of true syphilitic ulcers) as pseudo-syphilitic sores. They may or may not have been syphilitic; and although we are an advocate for the use of mercury in all cases as a means of safety, still we are ready to admit that a case now and then occurs, in which the primary ulcer is destroyed by means of escharotics, without the supervention of secondary symptoms; although mercury was not used either internally or externally. Has Dr. Dudley never seen a case parallel to the following, mentioned by Rousseau: A young man, having forgotten in a spell of merry enjoyment that he had left at home his female companion, indulged himself in a taste of variety: came to himself again, and hardly recollecting his *dream*, he returned to his wife, without any apprehension of being in a situation to infect her; a day or two after, beginning to feel an uneasy sensation upon glans penis, he found on examination that he had three little sores as big as the head of a pin. He applied sulphate of copper, and in the course of three days was as well as ever. Shortly after he went to sea, leaving his wife unapprised of the impending evil. A few days after his departure, painful sensations in her inguinal regions were soon followed by the appearance of swelling: supuration and ulceration occurred, and she was relieved only after the use of medicine for six months. The husband never afterwards had any symptom of venereal affection. Cases similar to the foregoing are we presume familiar to every physician. Spoken of as they are

by Ricord and other writers on venereal, we are inclined to believe that the small sores on the glans penis of the husband, and the buboes in the groin of his wife were truly syphilitic: the disease in the former was destroyed by the use of an escharotic, without causing secondary symptoms—while the latter, was less fortunate, being reduced to a “dangerous extremity,” whether by the injudicious use of mercury or not, we are not informed. In regard to escharotics, we can truly say, that we have always found them useful—often times indispensable. Their employment is never dangerous, or likely to disguise, or lock up the disease; they always leave behind them a certain index for the employment or otherwise of mercury. We refer to the button-like hardness of the cicatrix.

After all that has been said in favor of the non-employment of mercury, its advocates are beginning to change their opinions, and acknowledge that mercury is the antidote for syphilis. From the army reports, most of the cases said to be cured, were cases of recent origin, no further advanced than the simple venereal pustule, or original chancre—while the others were almost universally attacked with secondary symptoms. Although mercury is the only acknowledged specific against its ravages, it is not unfrequently advised—given, when its use is certain destruction. Its administration is not well understood, if we may judge from the conflicting statements of various writers, and knowledge in regard to it can only be gained by experience. The use of mercury being in itself an evil, and its effects frequently so deplorable, it has become an object with the profession to know to what extent it should be carried to be beneficial—a problem which experience has heretofore found difficult to solve: a part of the profession contending that it should be carried to the extent of producing salivation, while others deny the necessity of its being carried so far. Our observation leads us to believe, that a moderate soreness of the gums, continued for a time, proportioned to the violence of the symptoms, and temperament of the individual, is all that is necessary (so far as mercury is concerned) to effect a radical cure of syphilis. The remedy should be gradually introduced into the system, taking due care not to enfeeble the powers of life to an unnecessary extent. We regard not so much the amount of soreness of the gums, as the amount of mercury taken, and the effects produced—viz. healing of the sore, or destruction of the indurated cicatrix, if an escharotic has been used. A speedy salivation is to be deplored—while, on the other hand, a too great tardiness in the

specific effect of the mercury is to be guarded against: in the former case, its effects are to be counteracted by appropriate living, and the use of adjuvant remedies—in the latter, the dose is to be increased. The danger arising from profuse salivation, we need not mention; its effects have been witnessed by almost every practitioner. It becomes the profession to be cautious in its use. Its consequences are so dreadful under certain circumstances, that it is better to err on the safe side, and give too little rather than too much. When not enough has been given to effect our object, the dose can be increased: when too much is administered, its ravages are almost without limit, not unfrequently leaving the original disease uncured, in addition to its own poisonous effects.

In conclusion: much has been said and written on the subject of syphilis, and still the disease is but little understood. Revolutions are constantly going on in regard to its treatment, and it is to be feared that we are not more successful in its management than our fathers. In each successive change, there has been but a substitution of error for error. To arrive at any thing like perfection, in the treatment of this or any other disease, we must rely upon facts only, disregarding the cherished opinions of teachers when not in accordance with experience. By such a course alone shall we be enabled to gain true knowledge concerning the nature and treatment of syphilis, and thereby disarm the disease of all its terrors.

ARTICLE III.

Case of Acute Traumatic Tetanus, treated with the Cannabis Indica (Indian Hemp) unsuccessfully. By PAUL F. EVE, M. D., Professor of Surgery in the Medical College of Georgia.

To Professor O'Shaughnessy, of the Medical College of Calcutta, the profession is indebted for the introduction of the Indian Hemp into the materia medica; and in no other disease is it more recommended than for traumatic tetanus. Within the past few months, there have been various and somewhat conflicting reports respecting the efficacy of this article as a remedial agent, in the British medical journals, and the subject is beginning to attract attention in our own periodicals. In the 4th number of this Journal, we published some

notice of the experience with it by Mr. Donovan of Dublin, and Dr. Lawrie of Glasgow; and under a different head of this number, the reader may find the subject continued.

The prognosis of acute traumatic tetanus is so exceedingly unfavorable, that the profession is prepared at all times to give a fair trial to any suggestion or agent promising success in its treatment. The aphorisms of Hippocrates, that *tetanus supervening on a wound, is mortal—they who are seized with tetanus, die within four days*, are just as true now as when they were written. The great military surgeon of England, the late Dr. Hennen, confesses that he never saw a case of acute symptomatic tetanus recover. In the acute species, Dr. Dickson of Europe, found all curative measures followed by unqualified disappointment. Mr. Morgan's testimony is still stronger; he says, I have never yet seen or heard of an instance of recovery from acute tetanus.* The fact that Dr. O'Beirne witnessed two hundred cases in the peninsula of Spain, not one of which recovered; and the experience of Sir James McGregor, in several hundred cases which occurred among the British troops in that country and Portugal, very few of whom, he says, were benefited by any medicine or plan whatever, is already alluded to in this number of the Journal, by our valuable collaborator, Dr. Stevens, of Liberty county. Mr. Alcock, surgeon to the British Legion serving in Spain a few years ago, noticed seventeen cases of traumatic tetanus, one of which number alone recovered. And where, we ask, is the practitioner of medicine or surgery, who cures *trismus nascentium*? It is true that occasionally, by almost any plan of treatment, and even by very opposite ones, this affection, in some of its varieties, is cured. Cases to this effect may be found detailed in every medical journal, (several even in this very number) still no one will deny but that acute traumatic tetanus ought to be considered an *opprobrium medicorum*.

We find it stated in Druitt's Surgery, that with the resin of the Cannabis Indica, or Indian Hemp, Dr. O'Shaughnessy and others, cured eight out of twelve cases of tetanus; and Mr. Donovan says it was almost uniformly successful in his practice. The variety of the disease is not mentioned. In a debate which occurred the 22d April last, in the Royal Medical and Chirurgical Society, and reported in the London Lancet, on the reading of a "case of traumatic tetanus successfully treated by large quantities of wine and brandy, with

* Vide Cyclopædia of Practical Medicine, vol. iv., p. 369.

other means," and in which Drs. Watson, Wilson, Davis, King, Snow, Curling, (author of a work on tetanus,) Solly, Simon, Caesar Hawkins, &c., took part, we are surprised to see no allusion made to the Indian Hemp.

In the case of Prof. Miller, (who has recently published the best work on the Principles of Surgery.) reported in the London and Edinburgh Monthly Journal of Medical Sciences, for January, 1845, the success cannot be ascribed exclusively to any one agent employed. We refer to another part of this number for the history of this case, where also may be found two or three others, taken from the last number of Braithwaite's Retrospect.

In the September number of the New Orleans Medical and Surgical Journal, may be found a case detailed by Dr. Willson of that city, in which the Indian Hemp was used with success, at least for a time. The tetanus occurred in a negro man, and on the 25th May, 1845, Dr. W. was called to it in consultation with Dr. Farrell. Two weeks before, he was attacked "with stiffness and uneasiness in the back of his neck, consequent upon exposure to wet and inclement weather." "We subsequently learned (says Dr. Willson) the fact of his having suffered, about two months previously, from a punctured wound of his foot, that suppurated, but healed in a short time without any untoward symptom." This was a chronic case, continuing more than a month, but in which the Cannabis Indica was employed with good results. In a postscript, however, by Dr. Farrell, a few weeks after the patient was dismissed, cured, he says—"the case has terminated fatally." In five days from the time he was considered well, he was unfortunately attacked with measles—clonic spasms immediately supervened, and notwithstanding the "Indian hemp was given in large doses—also, brandy, morphine and quinine—without for a moment checking the progress of the disease." Dr J. Farrell adds that, "two years ago I treated a case of traumatic tetanus with the Cannabis Indica; on the fourth day the symptoms were much alleviated, even in a more marked degree than in the preceding cure; unfortunately the supply of the medicine became exhausted, and none could be procured."

From the account of all the cases of tetanus published, in which the Indian hemp was tried, it still remained an unsettled question, whether it could be relied upon in the acute traumatic variety. So far as one instance can decide the matter, wherein the remedy was faithfully employed, and it alone almost exclusively, we are inclined

to the opinion that it may relieve, but will not cure. Certainly there was a case well adapted to give the article a fair trial—was one. An acute attack from a nail in the foot, entirely negated for near thirty hours after the incursion of the symptoms, the failure of the ordinary means to afford even relief, and then the steady expectation of increased doses of the hemp for twenty-four successive hours, under unremitting personal attention, were well calculated to exhibit the remedial powers of the medicine.

The article used had just arrived from England, and was obtained through one of our apothecaries, a graduate of the Philadelphia College of Pharmacy. It was insoluble in water—was precipitated when the tincture was much diluted, and adhered to the hands and vessels. The tincture was made by adding an ounce of the extract to a pint of undiluted alcohol.

CASE. Richard, a black man, aged 25, and a carpenter by trade, had a nail run into his foot, by treading upon it, on Friday the 20th of September. He was of good constitution, well made, and enjoyed excellent health. He had a small umbilical hernia, supposed to be congenital, but which gave him little or no inconvenience. It, however, rapidly increased in volume during the attack of tetanus, and pressure was required over it at every paroxysm, to restrain the protruding bowels.

The wound made by the nail was upon the planter surface of the left foot, opposite the metatarso-phalangeal articulation of the little toe, and was thought to have penetrated deeply. A lye-poultice was immediately applied, and Richard returned to his work, using frequently a ladder. On the evening of October 2d, the seventh day after the accident, he complained of pain in his neck and back. The next day he kept his bed and took salts and senna, which freely moved his bowels. At midnight between the 3d and 4th, he had spasms, and Dr. Joseph A. Eve was sent for. He enlarged the wound with a lancet, and some pus was evacuated—a lye-poultice was then applied to the foot. A blister was placed over the whole length of the spine; a gr. of morphine given, and half a tea spoonful of laudanum directed every hour until relief and sleep were obtained.

Oct. 4th, 7 o'clock, A. M. This is the ninth day since the accident, and about thirty-five hours from the commencement of his present symptoms. Dr. E. found he had taken the laudanum three or four times, and in addition to the narcotic and reval-

ve treatment, gave 20 grs. calomel. The body was found arched backward.

I was invited to see the patient at 10, A. M. Symptoms—trismus and opisthotonos; great distress of countenance; drops of sweat on his face and neck; decubitus on the back; great difficulty of deglutition; pulse 90 to 100, full but not strong; respiration 30 to 40—variations dependent upon convulsive spasms which occur every few seconds. Prescription—2 grs. of the Extr. of the Cannabis Indica, in tincture, every fifteen minutes. He swallowed two doses with great difficulty, and then vomited. It will be remarked here, that the 3rd was a cloudy day, with the wind at N. E.—Thermometer 10 to 69—Barometer falling. On the 4th, it rained steadily all day, resembling the 3rd in other respects. As the patient's accommodations were not good, he was brought to my office, and I was not absent from him more than three or four hours altogether during the whole treatment. I administered every dose of medicine, and gave him nearly all the nourishment he could be induced to take.

At 11 o'clock, examined the wound; it is healing under the lyepoultice; and finding the stomach very irritable, I gave of the tincture of the Indian hemp 5 grs. diluted in tepid water in an enema. At 12, M., injected into rectum 10 grs. At half-past 12, gave 5 to 6 grs. per orem, but which were immediately rejected. At 1, injected 10 grs. more. By great persuasion got the patient to take some brandy and water, and a few table-spoonfuls of Madeira wine. To this he was violently opposed, and though he could now swallow freely and his stomach retained these stimulants, he would not be induced to drink them freely. At half-past 1, the patient has evidently improved—the paroxysms of spasms are now less frequent and less violent—he sleeps quietly, and occasionally snores. He lies on his back, keeps his eyes closed, can open his mouth a little, but has no disposition to talk—seems to be in a half narcotised state. No material change yet in the pulse or respiration.

At 20 minutes past 2 o'clock, gave 4 grs. of the hemp per orem in brandy and water; repeated the same quantity in 5 minutes; they are vomited in 8 minutes. At 3, administered 15 grs. to rectum. Gave 5 grs. sulph. quinine in brandy and water; vomited in three minutes. Drs. Newton and Ford now saw the patient, and were satisfied that the rigidity of the muscles was not great, as he could open the mouth to about half its usual extent, and he laid nearly straight on his back—the convulsive paroxysms recurring about every two to

seven minutes, Richard was observed to scratch his face with his hand, and to draw up his left thigh and leg.

At 4 o'clock, with assistance, he turned on his right side, and called for a vessel and passed about half a pint of high colored urine. Half-past 5, gave 15 grains of the Cannabis Ind. At 7, took an arrow root and immediately vomited. Past 7, injected into rectum 24 grs., and at 9 o'clock gave 48 grs. of hemp in enema. Half-past 11, seems to be doing well, pulse still 100, respiration 30, perspiration some minutes apart. We recommended the brandy and arrow root to be freely given.

Oct. 5th, 3 o'clock, A. M. Called up to patient, and found him worse; pulse 130 and respiration 40. Complains of difficult breathing, and his convulsive spasms come on every minute or two, and are more severe. Administered 16 grs. of hemp per anum; and the patient was evidently improved by it. The respiration became better, the pulse fell to 110, and quietude and sleep followed. 6. A. M. Is again worse; swallows with difficulty, cannot open the mouth and has obstinately refused to take brandy or wine. Immediately injected 48 grs. of the Hemp. At half-past 8, repeated the 48 grs. The patient is impressed with the belief that he will die. His respiration is 26, pulse 100 to 110; lies with his eyes still closed and his mouth half opened; spasms about half an hour apart.

Half past 10. The wound has healed, and the patient has not complained of it at all from the time it was lanced. Gave 1 1/2 dr. of tobacco in decoction per anum. The patient cannot be roused either by calling or shaking him. In a few moments after this, he vomited a dark colored fluid. Appears to be sinking. Injected brandy-toddy into the œsophagus through a catheter past into the nostril, but it was returned by the mouth. At half past 12, applied electro-galvanism, with the assistance of my friends, Messrs. Martin and Milligen, students of medicine. One wire was placed near the occipito-spinal junction, and the other to the sacrum. It operated for fifteen minutes, and agitated convulsively and forcibly all the muscles. The effects were increased activity in the circulation (pulse 130,) relaxation of rigidity in the muscles, and much improved respiration.

Half past 3, P. M. The patient unexpectedly asked for water—urged hot brandy-toddy and wine upon him, but he would swallow only a little water. Pulse 150—respiration 33. At 4, gave in enema 1 3/4 tinct. assafoetida and 1 3/4 tinct. hemp, in a little water.

ied electro-galvanism again, but found the patient sinking—he died quietly at 6, P. M. This was within four days from his attack with the first symptoms of lock-jaw. He retained all the injections; and I find, by examining the bottle, five ounces of the measured pint of the tinct. of the hemp remaining. I estimate the quantity administered in 24 hours to be near 63. It produced no aphrodisiac symptoms—he once asked for bread; took a morsel, but did not swallow. At another time he called for chicken-soup. Only half a bottle of Madeira wine and about the same quantity of brandy were consumed.

With regard to the fact that there were complete relaxations of the muscles during the treatment of this case, I think I am positively certain. That those of the lower jaw, neck and abdomen—indeed [I may add too of the lower and upper extremities—were rigid only at certain periods during the spasmodic contractions, all who saw the patient will admit. The pulsations of the abdominal aorta were easily counted through the opening of the umbilical hernia. The spasmodic convulsions recurred at first every ten or twenty seconds, and the longest intervals were about half an hour. They more frequently came on spontaneously, or in the natural course of the affection, but were occasionally excited by efforts of deglutition, &c.—the exacerbations never lasted more than a few seconds. The tonic contractions or spasm seem to start convulsively from the spinal column and agitate the whole frame. There was no peculiar action or movement in the leg or thigh of the wounded foot. His bowels were not moved during the whole progress of his attack, to the fatal termination. For several hours he passed no urine, and after the first evacuation, it would be squirted forth with much force, and before the vessel could be prepared to receive it. His face and neck were bathed in perspiration at several different times, but at other moments was of natural condition in this respect. He sometimes asked to be fanned, but never complained of pain.

I believe this is a faithful narration of all the phenomena which transpired during the progress of this case. And though the conclusion drawn from it is rather adverse to the exalted opinion entertained by some of the curative powers of the *Cannabis Indica* in acute traumatic tetanus, still if it can give only relief, it is certainly a valuable acquisition in the treatment of this almost constantly fatal disease. As the opportunity is now generously offered by the spirited editor of the *Boston Medical and Surgical Journal*, of procuring the

article from the original source, Calcutta, my next supply was genuine, whatever doubt may arise as to the character of that which has just been employed.

(Through a mistake, I regret that a post-mortem examination was not made.)

PART II.—REVIEWS AND EXTRACTS.

Amputation of the Limbs, in consequence of gun-shot wounds.

M. LAMARCA—being a part of the yet unpublished *Traité d'Opérative Médecine*, by that distinguished Surgeon. (*Transcrit from the Bulletin de Thérapeutique.*)

Gun-shot wounds are among the most frequent of the causes of amputation: they produce very often comminuted fractures; or penetrate often into the articulations; they cause contusions and lacerations of the soft parts; the bodies put in motion by gun-power convert superficially into an eschar the flesh with which they are in contact. When a projectile has removed the muscles of the posterior part of the thigh for about two-thirds of their length, a wound of this kind occupies the gastrocnemial muscles, I think it is necessary to amputate, although the arterial and nervous trunks may not have been sacrificed. The extent of the solution of continuity is very considerable; the surface presents conditions less advantageous than the wound resulting from an amputation: the former will cause more serious accidents than the second. The cautery instrument will indeed produce much suffering, but if we do not have recourse to it, the gun-shot wound will cicatrize with difficulty, and in general after a very long time, the cicatrix will be profound, adherent and of large dimensions; it will be easily lacerated; the loss of substance experienced by the muscular system, will embarrass the movements and render many of them impossible. I have seen some subjects, upon whom amputations were not performed after wounds of this character, and the slowness of the cicatrization, the accidents which preceded it, and the bad result obtained, caused much regret that the limb had not been removed. But should the wounds of which we treat, occupy the arm or forearm, inasmuch as their functions are not the same, I think that an operation may be generally avoided.

When projectiles have reduced the muscular system into a pulpy state in a great extent, without having lacerated the skin, the patient ought to be subjected to the precepts which we have established, and which as we have just seen, vary in different localities.

Amputation is especially required by vast solutions of continuity complicated with opening of voluminous vessels, or laceration of the nervous trunks.

We should recollect that on the field of battle; in the camp, we are obliged to perform amputations much more frequently : the opinions which we are about to advance, will be based upon facts observed when the wounded were in circumstances to receive all necessary care ; these opinions would be essentially different in the contrary case.

It has been pretended in modern works, that wounds of the articulations produced by a ball, were less serious when the articulation had not been largely opened. We do not entertain this idea, because the fluids furnished by the solution of continuity do not then find a ready escape, because they remain between the wounded articular surfaces and determine much irritation, and inflammation almost always fatal.

Larrey was so well convinced of this truth, that he has given the advice to make when necessary large openings to prevent the detention of pus. Experience has sanctioned this excellent practice in the hands of its author, and I have adopted it often with success. When the projectile opens the joints largely, without occasioning a too considerable loss of substance, it produces then a solution of continuity less disadvantageous than if it were narrow.

But is it necessary to resort to an amputation, when an articulation of the first or second importance has been opened ? Labastide reports many cases which shew that the articulations of the wrist, elbow, foot and knee, having experienced penetrating wounds, the patients were cured without the removal of the limb. Dupuytren obtained the same success in those wounded during the revolution of July ; Lombard, Léveillé, Percy, Faure, &c. cite facts of the same kind. It is said that these cases of success are but few in number, and that they are opposed by a greater number of cases of failure. This assertion is not exact with respect to the practice of Dupuytren.

I always suppose the patients, I repeat, placed under favorable circumstances as I have above stated, and I maintain that by employing the method of treatment which I have modified, wounds of the

articulations should very seldom require amputations, unless the soft parts surrounding the articulation have experienced too great a loss of substance: of this I have given the proof at the Hôpital de la Pitié and at the hospital of Grenier-d'Abondance, where I have preserved limbs for a great number of patients whose scapulo-humeral, humero-cubital, radio-carpal, carpo-metacarpal, tibio-femoral and tarso-metatarsal articulations, had been profoundly wounded.

It is generally believed that gun-shot wounds, although produced by a ball, almost always require amputation, if the body of a long bone and more particularly of the inferior limb, has experienced a comminuted fracture. I reject this precept; my opinion is based upon a great number of successful cases in which my mode of treatment was employed, and without which I am certain I should have been unsuccessful, like the practitioners who do not adopt it. Among a great number of facts, the following may be cited; but let us premise that in fractures with solution of continuity of the soft parts, the detention of even a small quantity of pus may produce general accidents of a very serious and often fatal character.

Lieutenant-Colonel Grand, was grievously wounded near Grenier d'Abondance; many balls riddled his arm, and the humerus was fractured in two places. Amputation was proposed; I did not entertain that opinion; I employed the medication above indicated, and for ten days every thing announced that it was about to be crowned with complete success. Suddenly a severe chill supervened; the appetite was lost, and a serious gastro-enteritis was developed. No error of regimen had been committed; the tumefaction had somewhat increased in the unsound limb, and also the pain. I believed that all these accidents depended upon the presence of pus, for which I sought with the greatest care. I recognized a slight fluctuation, and gave issue to scarcely two tea-spoonfuls of purulent matter—the next day the chill did not return; the affection of the intestinal canal had already disappeared, the appetite was restored, and the arm had greatly diminished in volume. M. Grand was cured, and is now colonel of a regiment of dragoons. This fact alone is sufficient to excite the attention of the practitioner. We have observed a great many others of the same kind, which it is unnecessary to cite. It is hardly necessary to say that by an early evacuation of the pus, the local and general accidents which it produces, are dissipated even with rapidity, but that if on the contrary, it is suffered to remain, these accidents may become very serious and often fatal. I

will add, that amputation then often becomes indispensable, and that frequently also the accidents are so intense and rapid, that there is no opportunity for performing it.

The brave Colonel Lebeau had a comminuted fracture of the arm at its superior third, from a ball at the battle of Waterloo; eighteen days afterwards he came to Paris, with the commencement of a very vicious callus; I broke it and placed the fragments in very regular contact, and the fracture was cured without deformity.

When I was charged at the Hotel Dieu, with a service in which were the soldiers who had been wounded at the battle given under the walls of the capital, Dupuytren and myself saved from amputation six patients whose arms had experienced comminuted fractures by balls; in two of these subjects, the solution of continuity of the bone occupied the middle part of its body, in three of them, it was observed upon the inferior third of the humerus, and in one, a little above the insertion of the deltoid muscle; in all these subjects the suppuration was of long duration; no spicula of bone was extracted; four were cured perfectly, with a more or less pronounced shortening of the limb, two left the hospital with fistulæ which furnished a small quantity of purulent matter; one of them returned after several years to show me his wound, which did not prevent him from exercising the business of a jeweller; sometimes, however, the arm was slightly tumefied, because the pus remained in the fistulous passages. I enlarged their orifices, and the accidents disappeared.

But when the thigh-bone is the seat of a comminuted fracture, it is generally believed to be necessary to amputate. Lombard, M. Gaultier de Claubry, S. Cooper, Percy, Larrey and Guthrie, say that they have only seen a few patients saved; most succumbed when the limb was not amputated; Ravaton assures us that the wound of which we speak is almost always mortal; M. Ribes has not met with a single cure; he has observed ten soldiers, upon whom the suitable care was bestowed, and they all perished; he adds, that in four thousand soldiers in the Hopital des Invalides, he has never seen one recover after the accident of which we speak. We should remark, however, that with the exception of the ten soldiers mentioned by M. Ribes, the others appear to have been treated in the army, where the necessary means for the care of the wounded are almost always defective, and where these unfortunates are generally transported to great distances in unsuitable vehicles and over bad roads; the reverses which were experienced must then almost necessarily have occurred. It has

been said that in Paris and Belgium, patients do not suffer for want of any of the means necessary for their cure, and that nevertheless more success has not been obtained; but I do not think they have employed the mode of treatment which I have indicated, and by whose aid we may almost always avoid or victoriously combat inflammation. I believe then, that in the accident of which I speak, amputation of the thigh ought not in general to be performed before the inflammation is developed, and before we have acquired the certainty that it will resist a well-directed medication; the formula of M. Serres d'Uzes for mercurial ointment should not be forgotten. All surgeons know, that with the exception of phlebitis and the absorption of the pus, which may take place in all wounds, inflammatory engorgements and its consequences are the only thing formidable in the solutions of continuity, of which we treat. I confess however, that my opinion is not yet based upon a sufficiently great number of facts; but it reposes upon analogies furnished by the traumatic extremities, whose comminuted fractures caused by fire-arms and treated in the manner which I have stated, are almost always unproductive of any grave accident.

Dupuytren has cured one patient. I have saved several; I have not lost one. I have preserved in my Surgical Clinique the following facts: "I cured without amputation, at the Hôpital de la Pitié, two patients wounded in July, 1830; one had received a bullet which caused a comminuted fracture of the femur; the other had a fracture of the same limb, which was caused by a bullet, that he also caused a very violent contusion for a pretty considerable extent. no accident supervened; the constitutions of these two wounded persons were very good; their internal organs were in an excellent condition; a circumstance which ought to be much considered in determining the question of an amputation or of the preservation of the limb.

I also shewed this morning at my Clinique at the Hôpital de la Pitié, a patient who was affected in 1814 with a fracture, with wound and spiculæ at the junction of the superior, with the middle third of the femur; a complete cure was obtained in the course of a year, without a fistula, and was maintained until 1835, at which period the patient walked very well and experienced no other inconveniences, except those resulting from a shortening of the limb, he hit it very violently against one of the corners of an anvil, and there supervened an abscess, of which he was cured.

It has been said that a comminuted fracture of the femur, produced

a ball, is almost always followed, when it is cured, by fistulæ and gorgement of the limb, which not only prevent the complete exercise of its functions, but which also cause eventually the death of the subjects, in a very great number of circumstances. I cannot admit these ideas; I have had the honor of some experience in military surgery; I have preserved relations with officers in whom the fistulous passages of which we are speaking, persisted; I have already said, that there is developed, it is true, from time to time, tumefaction, which is owing to the presence of pus in the substance of the tissues, but which disappears when the fluid is extracted. These persons walk very well; the suppuration which persists in a small quantity, incommodates them but very little; they are in a more advantageous condition than if they had been subjected to amputation, which it is hardly necessary to say is too often fatal.

The fistulæ of which we treat, may be complicated with even a considerable engorgement of the limb; sometimes it is the result of the inflammations which have primitively existed; at other times it is owing to phlegmasia neglected or badly treated, and occasioned by the presence of pus retained in the fistulous passages; this latter cause may be prevented by maintaining an easy escape for the purulent matter. In all cases, we have been in the possession for a great many years of powerful means to combat simple indurations; whether by the aid of local sanguine evacuations wisely directed when sub-inflammation exists, or with discutients when phlegmasia is absent. I have succeeded by following this treatment, in dissipating considerable hypertrophies of the thigh, and the patients afterwards walked with tolerable facility.

If the treatment be directed by surgeons who believe in the incontestable advantages of the alliance of medicine with surgery, and who are not entirely mechanical in the exercise of their profession, it seems to me impossible that patients should succumb in consequence of their fistulæ, unless their constitutions present some irremediable vitiation.

A soldier experienced a fracture of the right thigh, produced by a ball; the solution of continuity occupied the central region of the bone; amputation was not performed; the bone had consolidated, but there remained three fistulæ which penetrated to a great depth into the substance of the limb; no spicula was detected by the probe, which did not reach to the osseous tissue; the suppuration was abundant; the induration of the soft parts was very considerable throughout

almost the entire extent of the thigh whose volume was reduced by one third, and symptoms of sub-inflammation existed. I employed emollient cataplasms; I applied twelve leeches; this treatment was repeated every ten or fifteen days, according to the strength of the patient, and the progress or suspension of the amendment. When the phlegmasia disappeared, and the disease no longer continued to diminish, we suffered seven days to elapse, when we had recourse to discutients, and suspended the employment of them as they caused too much excitement or when the inflammation returned. Five months were sufficient to restore the limb to its normal value; there remained no induration appreciable by the touch; the pus was formed in small quantity, and the patient walked tolerably well when he left the hospital. We have seen this man for several years, and the success has continued about the same. In cases of this kind the iodide of potassium, administered internally, would produce excellent effects.

Captain V. received at the battle of Waterloo a ball, which fractured the femur at the point of junction of its superior with its middle third; the fracture was consolidated, but fistulae persisted. The patient walks sufficiently well. From time to time pus is retained when pain and difficulty in taking exercise ensue; but when the purulent matter is evacuated, the tolerably good condition which we have indicated returns. I have been the physician of Capt. V. for eight or ten years.

Two or three times a year, there comes to my consultation an old soldier, whose femur has been fractured about an inch above its middle; he walks almost without lameness, and has two fistulae, one upon the anterior and the other upon the external region of the limb which is slightly atrophied, although there exists a very limited induration. He sometimes experiences pain, and tumefaction supervenes; he has learned to dilate the orifices of the fistulous passages by means of prepared sponge, the pus escapes and the accidents disappear. Incisions are very rarely employed.

Let us say, in concluding, that if fractures caused by gunshot wounds are complicated with laceration of the principal blood-vessels of the extremities, it is advised to perform amputation. But in cases in which the soft parts have not experienced considerable laceration or loss of substance, and more particularly in wounds of the thoracic extremities, may not an opposite course be pursued? If, indeed, by the method of treatment which I have indicated, we succeed almost

ways in avoiding or in combatting victoriously acute inflammation, could not the ligation of the opened artery succeed, though we could make abstraction of the various kinds of apparatus intended to maintain the fragments? We know that many fractures are cured without this apparatus, and that frequently the callus is not so disadvantageous—sometimes even it is not too irregular. I leave to practitioners the care of meditating upon these ideas.

Guns bursting in the hand ordinarily produce very extensive wounds, in consequence of which, however, amputations are very rarely performed; the flaps which cannot live are removed, the surface of the solution of continuity is made as smooth as possible, and a cure almost always takes place, though the first metacarpal bone may have been removed with the thumb—though the articulations of the bones of the carpus with each other, and with those of the metacarpus, may have been more or less opened. I have seen my father obtain very great success in circumstances of this kind. I should remark, however, that he practiced in a very healthy climate, where men enjoyed excellent constitutions. Would it not be possible in cases of this kind to avoid an amputation of the fore-arm, when the disorders in the radio-carpal articulation were not too extensive? We have cited above, a case which inclines towards the affirmative of this question.

Other things being equal, fractures complicated with a solution of continuity of the soft parts, and occasioned by ordinary causes, are less serious than those produced by gun-shot wounds; they offer also less danger in the thoracic, than in the abdominal extremities. It is often very difficult to distinguish the circumstances in which amputation should be performed, from those in which it should be rejected. If several surgeons are assembled to decide this important question with respect to a patient who is before them, it is not uncommon to hear them pronounce opinions essentially different. Let us repeat, that if the locality be advantageous, if the patient be well constituted and the intestinal canal in an excellent state, if his moral condition be good, if the animal economy be not tainted with any virus, operations should be more rarely performed; for in the favorable circumstances which we have just indicated, success has exceeded frequently all hope. I am fond of repeating, to young surgeons who have pursued their studies in the hospitals of large cities, that they should distrust the cases and observations which they have there collected, and that elsewhere amputations should be much more frequently rejected.

When the principal vessels of the fractured limb are divided—when there exist considerable ecchymosis and sanguine effusion—when the soft parts are pretty extensively lacerated or contused, and the articulation, either of the shoulder or of the elbow, or of the wrist, or of the hip, or of the knee, or of the foot, with the leg, is opened, it is necessary to amputate. But when the large vessels have been spared, when the large joints are not in contact with the air, we do not have recourse to the removal of the limb, though the fracture be comminuted, though the effusion of blood be pretty considerable, and though the soft parts be lacerated and bruised to a certain extent. We succeed better, I repeat, upon the arm or fore-arm, than upon the thigh or the leg. I have frequently applied these principles at the Hôpital de la Pitié, and all know the great success which I have obtained. A patient who occupied No. 14 of the ward Saint-Antoine of our hospital, was cured of a fracture of the inferior third of the leg, which presented the following circumstances: obliquity of the osseous solution of continuity for two inches upon the tibia, which was denuded to the extent of about two inches and a third from the tissues which should have covered it; the superior fragment of the bone crossed the direction of the inferior one and was lodged at the external side of the latter. In consequence of the dimensions of the wound, I was enabled to recognize this displacement. I produced a relaxation of the muscles; I seized the former of these fragments with the thumb, and index and middle fingers; I raised it at first, and then carried it easily inwards and a little backwards, where it remained without the assistance of any apparatus; the limb was only maintained in a semi-flexed position by cloths folded like a cravat, and disposed transversely upon it. I will remark that, before I had recourse to the manœuvre which succeeded so well, it had been impossible for me to reduce the fracture, although the displacement longitudinally was very slight, and although I had employed great efforts, extension and counter-extension having been established. It would be useless to say, that the soft parts had been extensively lacerated, and that much blood had been effused among the tissues. The cure certainly did not take place without deformity of the limb; but it is evident that the subject is in an infinitely more advantageous condition than if amputation had been performed. The inflammation and tumefaction were slight, and a counter-opening was made behind the fibula to facilitate the escape of the pus, the quantity of which was inconsiderable. General bleeding and diet were employed,

According to the principles upon which we have insisted. I combatted, notoriously, a delirium which was very violent and without fever, the musk administered internally in large doses; the sulphate of quinine triumphed promptly over the extreme prostration which had followed the exaltation of the nervous system.

A Professor of one of the Colleges of Paris, had an oblique fracture of the inferior third of the leg, with laceration of the soft parts, a great extent; the superior fragment projected through the flesh; extensive ecchymosis existed. A surgeon, attached to one of the hospitals of Paris, had already proposed the removal of the limb. I was called—I did not entertain that opinion. I employed my method of treatment; the apparatus was not applied even until the sixth day; no accident occurred; the cure was complete, and the patient does not limp. If the nature of this work permitted, I could analyse here the cases of patients, cured without amputation at the *Hopital de la Pitié*, though their limbs had been crushed by the wheels of vehicles.

When the fragments have traversed the skin, and cannot be reduced, in consequence of the narrowness of the opening, we make a suitable enlargement of the wound, and we remove that part of these fragments which is denuded of its periosteum. I have never met with cases in which an enlargement of the wound was not sufficient to permit the reduction of the fracture with the assistance of appropriate means.

When the large vessels have not been divided, and the soft parts do not present a too extensive laceration and attrition, although a large articulation is opened, I think that it is not necessary to amputate. I have saved the limbs of persons in whom the articular surfaces of the elbow, wrist, &c., had been exposed. Would the same success be obtained with respect to the knee, and tibial and tarsal articulations?

Much controversy has existed respecting the questions which we have just discussed. There are indeed some surgeons who have collected numerous facts in favor of the preservation of the limbs—there are others who report a great number of cases in favor of amputation. I think that opinions would be less discrepant, and that perhaps even all dispute would be ended, if medical knowledge was more generally diffused, and if pre-conceived ideas or a spirit of exaggeration or an education in a bad school, did not so frequently serve as a guide to the physician. Read, indeed, the cases which have been

published, and you will see that in the majority of them, truly medical ideas have been singularly neglected. N.

On the Pathology, &c., of the Urinary Deposits. By Dr. GOLDING BIRD.—(Ranking's Abstract.)

Although the important researches of Dr. Golding Bird are now somewhat destitute of novelty, having been some time since embodied in the pages of the Medical Gazette, yet we think that we shall be conferring a benefit upon our readers by reproducing the more important portions of them in a condensed form, especially as the publication of a separate and most valuable work on "Urinary Deposits" comes within the limits of our retrospective labors. We feel convinced that the brief summary which we shall give cannot fail to produce the desire for a perusal of the original work:—

The principal pathological conditions of the urine which are commonly met with are the presence of uric acid and the urate of ammonia, the oxalate of lime, of the phosphates, and of certain elements of the blood.

URIC ACID.

Diagnosis of uric acid deposits. Uric acid does not dissolve by heat, but on the contrary is rendered more distinct by the solution of the urate of ammonia which frequently accompanies it. Hence, in examining for this deposit, heat the urine in a watch-glass; the uric acid becomes visible as the urate of ammonia dissolves. Heated with liquor potassæ, the uric acid dissolves. With nitric acid it is also dissolved; leaving, on evaporation, a residue of a beautiful pink, which becomes purple when held over the vapour of ammonia.

Microscopic characters. The original form of the uric acid crystal is the rhombic prism. In order to observe these crystals, allow the urine to repose in a tall vessel, decant the greater portion, and place some of the turbid layer into a watch-glass and warm it gently; remove the supernatant liquor by a pipette, and replace it with distilled water; the crystals then become distinct. "All that is then required, is to place on the stage of the microscope and under the watch-glass, a piece of black velvet; by means of a condensing lens, let a strong light be thrown upon the crystals; then bring the object glass into proper adjustment, and the colour, as well as figure of the crystals, will become beautifully defined on the black ground."

The rhombic form is, however, frequently replaced by others, especially by the square. Sometimes the crystals approach the figure of a fleur-de-lys, at others, they appear as flat tables, 'curiously marked with longitudinal striæ, giving the appearance of a fimbriated

5e. The coarse sand, which is of a red or deep orange color, is generally composed of cohering, thick, rhomboidal prisms, forming, leed, minute calculi.

Diagnosis of urate of ammonia. These deposits vary in colour from absolute whiteness to a pale fawn colour, brick red, pink, or rple. The deposit does not appear until the urine has cooled, and appears on the application of heat. If urine containing this deposit be placed between two glasses and examined with the microscope, it is found to be composed of myriads of minute globules, forming linear masses, or delicate stellate figures.

Circumstances giving rise to the uric acid and its compounds. Excluding all abstract theories, whenever an excess of uric acid, or its combinations, occur in the urine, a normal quantity of water being present, it may safely be inferred that one or other of the following states exist:—

- | | |
|---|---|
| a. Waste of tissues more rapid than the supply. | } Fever, inflammation, rheumatism, phthisis. |
| b. Supply of nitrogen in the food greater than is required for the reparation of tissues. | |
| c. Supply of nitrogenized food not in excess, but digestive functions unable to assimilate it. | } All grades of dyspepsia. |
| d. The cutaneous outlet for nitrogenized excreta being obstructed, the kidney is called upon to compensate for this deficient function. | |
| e. Congestion of the kidneys, produced by local causes. | } Blows, and strains of the loins, diseases of the genital apparatus. |
| | |

The medical treatment of this condition of the urine must be based upon the due discrimination of the exciting cause. If the first condition be the cause, the remedy obviously consists in the withdrawal of a portion of the animal food, or an increase in the amount of exercise. Under the other conditions of the system the treatment resolves itself into the following indications:—

1. *Attention to the functions of the skin.* This is an indication of much consequence. Warm clothing, with repeated friction by means of a hair glove, removes the deposit of uric acid gravel. The warm bath, and still better, the vapour bath, is also a most valuable diaphoretic. The latter is conveniently applied in private practice by means of Duval's apparatus. Actual diaphoresis is by no means absolutely necessary.

2. *Restoring the tone of the organs of digestion.* This part of the treatment of calculous affections must be modified by the peculiarities of the case, and is identical with that of the different forms of dys-

pepsia. Great relief may be obtained by careful attention to the bowels, and minute doses of mercury, as a grain of hyd. c. creta, with three grains of extract conii, given three times a day, with moderate doses of the carbonate of potash in infus. serpentariæ. Gastrodynia and pyrosis may be met with half-grain doses of argente nitras, given immediately before a meal.

3. *Remedies which act as solvents.* These chiefly consist of alkalies and their carbonates; the biborate and phosphate of soda, and benzoic acid. The liquor potassæ may be employed in half drachm doses thrice a day. The carbonate of potash and soda are, however, more agreeable forms, and of these the bicarbonate of potash is to be preferred. The latter may be usefully combined with citric acid, in the proportion of grs. v. to 3ss. of the bicarbonate, dissolved in a tumbler of luke-warm water. This mixture evolves enough carbonic acid to be "sparkling," and is taken with readiness.

It is to be remembered that some persons cannot bear the free use of alkalies without suffering severely in their general health. Dr. Prout affirms that their injudicious use may lead to the formation of oxalic acid.

Other solvents are the biborate and the phosphate of soda; the latter is specially recommended by Liebig; the dose should be ʒj. to 3ss, largely diluted. Dr. Bird states that he has administered this drug in two or three chronic cases of uric acid gravel with great effect.

The benzoic acid has likewise been much praised of late, having been first introduced by Mr. Ure. It may be given in ten-grain doses, dissolved in a weak solution of phosphate of soda, as below:—

B. Sodæ carb. ʒjss.
 Acid. benzoici, ʒij.
 Sodæ phosphatis, ʒiij.
 Aquæ ferventis, ʒiv.
 Aquæ cinnamoni, ʒviiss.
 Tinct. hyoscyami, ʒiv. M. ft.
 Sumat. æger. coch. in magna ter in die.

It is important to bear in mind, that, by the employment of remedies capable of dissolving a deposit in the urine, we are merely palliating, and not curing the disease. Its entire removal can only be accomplished by remedying that state of the system, or of a particular organ, which may be the exciting cause of the calculous formation.

PURPURINE.

Urine containing this substance is of a pink or purple colour, and of variable specific gravity. The purpurine is deposited in conjunction with urate of ammonia, where that product is in excess, and gives to it a deep carmine colour. If the urine be evaporated to the

onsistence of an extract, and treated with alcohol, it yields a fine purple tincture. This property will at once distinguish the colouring matter from that of blood, for which it might otherwise be mistaken.

Pathological indications. The presence of purpurine in excess is almost invariably connected with some functional or organic mischief in the liver, spleen, or some other organ connected with the portal circulation. It is, therefore, in its lighter shades, a common occurrence in the dyspepsia of the intemperate. Pink deposits are almost constantly present in cirrhotic or contracted liver.

OXALATE OF LIME.

Dr. Bird was the first to point out the frequent occurrence of this deposit; neither Prout, (until his last edition,) nor Rayer, nor Willis, have given to it the importance which it is now sufficiently clear that it demands. It is, according to the observations of Dr. Bird, of far more frequent occurrence in the densely populated cities than the deposits of earthy phosphates.

Diagnosis and microscopic characters of oxalate of lime. To examine for this deposit, allow a portion of urine, passed soon after meal, to rest in a glass vessel; decant the upper fluid six-sevenths; pour a portion of the remainder into a watch-glass, and warm it gently. This proceeding removes any obscurity arising from the presence of urate of ammonia. Having then allowed the urine to repose for a few minutes, remove the greater portion of the fluid with a pipette, and replace it with distilled water. A white glistening powder will now become visible, which, under a low magnifying power, is found to consist of octohedral crystals of oxalate of lime. These crystals, ignited on platinum foil, give a residue of carbonate of lime. The octohedral is the ordinary shape of the crystals, but they sometimes assume other forms, the most usual of which is that of a dumb-bell.

A very constant phenomenon observed in the microscopic examination of oxalic urine, is the presence of epithelial scales. So constant, indeed, is this occurrence, that the presence of the latter has frequently led to the suspicion of the presence of oxalate of lime.

Pathological origin of oxalate of lime. This is a question of very great interest. It is scarcely possible to avoid being impressed with the probable physiological connection between this matter and the presence of sugar. It is indisputable, that saccharine matter finds its way to the blood under certain circumstances, and is eliminated by the kidneys; and we know that, under certain morbid influences, the blood may, while in the stomach, be rapidly converted into sugar, and pass by the kidneys as an effete matter. Recollecting, also, the facility with which sugar and its chemical allies, as gum, starch, &c., are, under the influence of oxydizing agents, converted into oxalic acid, we are tempted, with Dr Prout, to the conclusion that the oxalate of lime owes its origin to sugar.

Dr. Bird, however, has observed in opposition to this opinion:—

1. That in the urine oxalate of lime is diffused through the fluid, and in a crystalline form. 2. That the urates are in excess in the majority of cases. 3. That in all there is more urea than in healthy urine of the same density. 4. That there is frequently an excess of the phosphates attending the oxalate of lime. 5. That no evidence of free sugar has occurred in the specimens submitted to examination. Now, in diabetes there is seldom an excess of urea or the urates, the increased specific gravity depending solely on the presence of sugar. Thus so far as the abstract examination of the urine is concerned, no countenance is given to the idea of there being any relation between oxalic and saccharine urine. What then is the source of the oxalate of lime?—from the symptoms alone which accompany the deposit, there can be no doubt of the existence of serious functional derangement of the digestive organs, especially of the stomach, duodenum, and liver. Whatever, therefore, be the immediate agent which causes the kidneys to secrete oxalic acid, the primary cause must, as shown by Dr. Prout, be referred to the digestive apparatus. It must be recollected, also, that an excess of urea, and often of uric acid, in most instances accompanies oxalic urine; it is probable, therefore, that both these products are the result of the same morbid influence; and when the close chemical relation between urea, uric, and oxalic acid, is borne in mind, is it not a legitimate conclusion that the disease under consideration is a variety of azoturia, in which the vital chemistry of the kidney converts part of the urea, or the elements which in health would have formed urea, into oxalic acid?

Symptoms accompanying the secretion of oxalic acid. As a general rule, persons affected with oxalic urine are remarkably depressed in spirits, and exhibit a peculiarly melancholy aspect. Dr. Prout mentions a lurid tinge on the skin. They are generally emaciated, hypochondriacal, and irritable in temper. The sexual power in men is deficient or absent. There is usually a constant pain or sense of weight in the loins, with great derangement of the assimilative powers.—[To these may be added, according to Dr. Bence Jones, frequent desires to micturate; the urine in some cases being scanty, at others profuse in quantity.]

The most common exciting causes appear to be exposure of the lower part of the spine to cold, mechanical violence in the same region, and unnatural excitement of the sexual organs, as is shown by the frequent concomitant of involuntary seminal emissions. In many cases there was no obvious cause beyond mental anxiety and attention to business.

Therapeutical indications. The treatment in the majority of cases is very successful. As a general rule, all the functions of the body, when obviously imperfect, should be corrected; the skin should be protected by flannel; and the diet carefully regulated. This should consist of well-cooked digestible food, of vegetable and animal substances; all things which tend to produce flatulence being carefully avoided. Beer and wine should not be allowed, especially

former. If some stimulus be required, the best is weak brandy and water. The nitric acid, or the nitro-muriatic acid in infusion, if continued sufficiently long, will generally be found successful. In cases where these have failed, active tonics, especially the sulphate of zinc, or if the patient be anemic, the salts of iron, appear to be of great use, as is likewise the shower-bath. There is no remedy which appears to exercise a marked influence over the characters of the urine, and which holds out great promise of utility in oxyluria—this is colchicum. In two instances in which oxalate of lime existed in abundance before its employment, uric acid reappeared and replaced the oxalic acid in a few days.

EARTHY PHOSPHATES AND CARBONATE OF LIME.

Diagnosis. The earthy salts are always white unless coloured with blood; they are soluble in dilute hydrochloric acid, and insoluble in ammonia or liquor potassæ. Heat does not clarify the urine. The chief errors in diagnosis arise from the presence of mucous and pus in the urine, which mask the chemical character of the earthy deposit.

The physical appearance of these deposits is variable; where it consists chiefly of the triple phosphates it subsides as a white crystalline gravel, or if the quantity be small it appears on the surface of the urine in the form of an iridescent pellicle. At other times the phosphates will fall to the bottom like a dense cloud of mucus, or hang in ropy masses so similar to that product as not to be distinguished from it by the naked eye.

The urine which deposits these salts is not necessarily alkaline; it is pale, secreted in large quantities, and of low specific gravity (1.005—1.014.) In the case in which the iridescent pellicle appears, there is usually present a form of irritative dyspepsia, but this is merely a functional and not an organic derangement, the urine being often of high specific gravity (1.020—1.030,) and containing an excess of urea. At other times, the urine is deep brown, foetid, generally alkaline, and loaded with ropy mucus, in which the crystals of the triple phosphate will be discovered.

Pathological indications. These deposits always denote a serious state of things, being generally indicative of severe functional, and oftentimes of organic mischief. They always co-exist with a depressed state of nervous energy, which is often generally and more rarely local in its seat. Of the former we have instances in the wear and tear of body and mind in old people; of the latter in injury to the spine. The occurrence of the triple salt, unconnected with deposit of phosphate of lime, exhibits the least alarming course of events. It is generally in these cases signalized by irritability of temper, restlessness, uncertain appetite, and fatigue on slight exertion.

In the milder cases of indigestion, especially in gouty habits, the phosphates appear in the form of the pellicle before mentioned. This condition of the system is disinclined to the formation of stone,

but is rather to be regarded as an index of the state of the assimilative functions. A valuable diagnostic mark in these cases, in contradistinction to those where organic mischief is to be apprehended, consists in the fact that in the slighter cases the phosphates appear only in the urine passed at night.

The triple salt likewise appears in the urine of very old people, especially if they have been deprived of the ordinary comforts of life, and occasionally also, as has been noticed by Simon, in acute diseases, as pneumonia and pleurisy, at a time when convalescence has barely commenced.

In those cases in which the phosphates appear in the form of strings resembling mucus, the two classes of salts are usually found mixed. The urine is then almost invariably alkaline, and more or less foetid. The prognosis is always unfavorable in such instances, as either organic disease of the urinary apparatus, or some serious lesion of the spinal marrow, is almost invariably to be suspected.

Therapeutical indications. In considering the treatment of the phosphatic diathesis, as it is sometimes called, four different pathological conditions are to be taken into account, each of which is demonstrated by a separate process of symptoms.

A. Cases in which dyspepsia, with some febrile and nervous irritation, exists independently of any evidence of antecedent injury to the spine.

B. Cases characterized by high nervous irritability, with a varying amount of marasmus, following a blow, or other violence inflicted on the spine, but without paralysis.

C. Cases in which the phosphatic urine co-exists with paraplegia, results of spinal lesion.

D. Cases of diseased mucous membrane of the bladder.

Of these it will be only necessary to direct attention to the first, second, and fourth series of cases, as in the third the deposition of phosphates is a mere symptom of a serious lesion, which, whether the result of violence, or of insidious disease, must be treated according to the particular disease existing.

The first class of cases indicative of the presence of irritative dyspepsia is by no means uncommon. The treatment must be directed rather by general principles than limited to the solution of the phosphates. The exhibition of acids is merely palliative, and rather does harm in some cases, by masking an important symptom, while the 'fons et origo mali' still continues in full force. After a certain attention to the moral bearings of the case, our principal attention should be given to the re-establishment of the general health. The bowels are to be regulated by mild mercurial laxatives, active purging being strictly avoided. When this has been accomplished, the following combination will be of use:—*Tinc. hyoscyami, et Sp. ammon. aromat. aa ℥xx, et Mistur. gent. c. ʒj.* Should gastrodynia exist, great relief will be obtained by the administration of the oxyde of silver in half-grain doses. As the patient approaches

convalescence, considerable benefit will be derived from the sulphate of zinc in increasing doses, till four or five grains are taken thrice in the day.

The second form of the disease, which is characterized by a higher amount of nervous excitability, and by rapid emaciation, is more rare, but less amenable to treatment than the preceding. In this form the deposit is copious, and sometimes consists nearly exclusively of the phosphate of lime. The symptoms are lumbar pain, dry skin, red and varnished tongue, great thirst, and other symptoms closely resembling diabetes. The history generally affords some evidence of a strain or hurt of the back.

In the treatment of these cases, our chief aim must be to tranquilize the brain and nervous system by narcotics, as opium or morphia, as was first suggested by Dr. Prout, after which a generous diet, with the mineral tonics, as bismuth, zinc, or silver, are called for.

In some cases the symptoms are of a milder character, but there is a great tendency to the formation of a calculus: it is in these cases that acids are called for, but there is much uncertainty attending their use. The nitric appears the most serviceable; and the benzoic as recommended by Mr. Ure may be occasionally beneficial; but Dr. Bird puts but little faith in either, especially the latter.

The third class of cases, in which the phosphates are in all probability secreted by the unhealthy mucous membrane of the bladder are familiar to all, as frequently following chronic cystitis, retention of urine, from stricture and enlarged prostate. Here of course the primary disease must be treated, and not the mere symptom. It is in this form in which much good occasionally follows the injection of dilute acid into the bladder. An interesting case, in which this mode of treatment was completely successful after every other plan had failed, is related by Dr. Bird, to whose work we refer, as our space will not allow of its extraction. Deposits of carbonate of lime, and silicic acid are occasionally met with, but not sufficiently often to render their notice of any great importance.

ALBUMINOUS URINE.

Detection of albumen. As a general rule, if urine becomes opaque by heat, and on the addition of nitric acid, albumen is present; but if one of these tests alone be employed, there is the possibility of being misled by the following sources of fallacy:—

1. Heat will produce a white precipitate in urine, containing an excess of the earthy phosphates. *This is distinguished from albumen by disappearing on the addition of a drop of nitric acid.*
2. Heat, when applied to urine containing deposits of urate of ammonia, will sometimes, if actual ebullition be prolonged, produce a deposit of an animal matter insoluble in nitric acid. But this appearance is rare, and *is distinguished from albumen by being deposited only after protracted ebullition.*
3. Nitric acid will produce deposits in the urine of persons who

are taking cubebs or copaiba ; *this is distinguished by not being produced by heat.*

4. Albumen may be present, and yet not be precipitated by heat, if the urine be alkaline ; *nitric acid must be used* in this case as a test, since albumen combined with alkalies is not affected by heat.

Therapeutic indications. When albumen is the only constituent of the blood present in the urine, the treatment will vary, accordingly as the kidney is merely congested or is structurally affected. [The treatment of the latter is not here alluded to, but the reader is referred to the works of Bright, Christison, &c. The management of the congested kidney, as it occurs in the dropsy of scarlatina, is then described :]—The warm bath is the most valuable prophylactic remedy. I scarcely recollect, even in a large experience, a case of dropsy after scarlet fever, when the warm bath has been daily used as soon as the skin has begun to exfoliate, and continued until a perspiring healthy surface was obtained. When anasarca has occurred, strict confinement to bed must be enjoined, the warm bath used twice a week, and free action of the skin encouraged. This plan must be continued until all anasarca has vanished, and the urine is free from albumen. When this has taken place, the ammonio-lactate of iron and more liberal diet will speedily remove the anæmic condition of the patient.

BLOODY URINE.

The presence of the blood-globules in the urine may be recognised by the microscope. The treatment will vary according to the immediate cause of the hemorrhage. Absolute rest, cold to the loins, the mineral acids, and acetate of lead administered boldly, and for a short time, are our principal remedies. No remedy has, however, appeared to Dr. Bird so efficacious in the treatment of hæmaturia as the gallic acid. It should be given in five grain doses with mucilage and tincture of hyoscyamus.

Treatment of Traumatic Tetanus. By JAMES MILLER, Esq., Professor of Surgery in the University of Edinburgh.—(Braithwaite.)

The case which calls forth the following comments, by Mr. Miller, was that of a girl of seven years of age. We refer to it in this place chiefly to show the value of the *Indian Hemp* in its treatment. The wheel of a cart had passed over the middle finger of the right hand, and of course had inflicted a severe injury. Tetanus gradually made its appearance.

The peculiar risus had begun ; the jaws were clenched ; the masseters and temporals were tense and hard, and the seat of much pain ;

the limbs, especially the upper, were becoming rigid; the abdominal parietes were hard; the least exertion, such as endeavoring to open the mouth, and show the tongue, induced aggravation, with marked opisthotonos; and then, too, pain was complained of, not only in the jaws, but in the back. The finger had never promised well for satisfactory recovery; and I had no doubt as to the propriety of its immediate sacrifice; being well aware, that although in it resided the exciting cause of the formidable train of symptoms fast setting in, yet that removal of this could be expected to prove beneficial, only at a very early period of the case, ere the spinal cord had been all but irretrievably involved. Amputation was accordingly performed, with as little delay as possible, at the metatarso-digital articulation. Little pain was complained of; and blood flowed but sparingly. I abstained from deligation of any vessels; partly, because a moderate loss of blood might not be without its use, at this the commencement of the treatment; but chiefly, because I was anxious, by avoidance of the use of ligature, to leave the wound in as favourable a state as possible—free from all source of further irritation. For a like reason, no stitches were employed; sufficient approximation being effected by tying the adjoining fingers together by a slip of bandage.

Water dressing was applied, and 20 drops increased to 30 drops of the tincture of Indian hemp every hour or two, were administered. The further account and result of the case will be best seen in the following remarks by Mr. Miller.

Perhaps the first questions which present themselves, in regard to the foregoing case, are—was this an example of *acute* tetanus? or was it, from the beginning, of the chronic character? According to my own conviction, I have no hesitation in answering the former question affirmatively; and the latter, by a negative. And this I do on the following grounds:—1st, The case was traumatic: the affection following a wound, is usually acute. And, in this instance, the accession was at the usual time, and in the usual way. 2nd, The symptoms, at first severe, gradually, yet very perceptibly, gave way before the treatment employed. The trismus, opisthotonos, and rigidity of the upper extremities, as well as of the abdominal muscles, were at first great, and underwent frequent and cruel exacerbation; and these aggravations were induced by the slightest exciting cause. Rigidity gradually relaxed; and the exacerbations became less painful, less frequent, and less easily induced. 3rd, During a temporary interruption of the treatment, the symptoms threatened to return to their original severity; and again yielded to the resumption of the appropriate remedial means.

Then, as to the treatment. For some time I have been satisfied that in the treatment of traumatic tetanus, the most likely means of relief are to be found—1st, In early amputation of the injured part,

or isolation of it from the general nervous system by suitable incision on the cardiac aspect ; 2nd, In effectual and early evacuation of the bowels, and maintenance of free movement in them ; 3rd, In maintaining a sedative effect on the nervous centre implicated in the disease, by cold applied to the spine ; 4th, In the continued use of some one remedy calculated to allay muscular spasm—perhaps, aconite, Indian hemp, or tobacco ; 5th, In careful administration of nourishment, so as to husband the strength as much as possible ; 6th, In maintaining quietude, and avoiding all excitement likely to induce aggravation of the spasm.

1. As already stated, there could be no doubt as to the propriety of amputating the offending part in this case ; and the operation was accordingly performed, as soon as the tetanic symptoms were fairly declared. The comparative absence of pain and bleeding, during the incisions, was characteristic of the disease. The nerves of the removed finger were examined by Mr. John Goodsir, and found imbedded in dense inflammatory exudation—themselves expanded in bulk, and presenting the appearance of considerably increased vascularity. Were a similar case of injury to present itself, with like tendency to spasmodic flexion of the parts implicated, I should be inclined to regard that symptom as ominously premonitory, and should feel called upon, by early amputation, to sacrifice the part, even though it might otherwise afford good prospect of its own recovery.

2. The first prescription was a full dose of calomel and jalap, while the power of swallowing was yet comparatively free. It answered well, bringing away much foetid and dark-colored matter from the bowels, as usually happens in such cases. Sufficient action was afterwards maintained by enemata, containing turpentine and tincture of assafœtida. During convalescence, a marked perversion of the intestinal secretions persisted, and was got rid of only by a corresponding continuance in the use of alterative aperients.

3. Since the perusal of a case of hydrophobia, treated by Dr. Todd, of King's College, London, and published in the *Lancet*, No. 960, p. 583, I have felt very hopeful of ice applied to the spine, as a remedial agent, not only in that disease, but more especially in tetanus. And I was determined to make trial of it on the first opportunity. Its action is obviously sedative on the nervous system ; powerfully and directly so. So soon as circumstances permitted, it was had recourse to in this case, and was maintained in constant, or almost constant operation for ten days ; the bags of ice being laid along the whole spine, but with the chief effect directed on the upper part. Forewarned by the circumstances of Dr. Todd's case, I was prepared to use this remedy with much caution, aware that the sedative power might prove excessive, and might demand not only considerable intermission of the application, but a contemporaneous use of general support, and, perhaps, of stimuli. I was surprised to find, however, that no occasion for either presented itself. The pulse kept low, certainly, and of but sparing strength, but not too much so. And the

only complaint made of the application, by the patient, was the attributing to it the severe pain felt in the back, which was caused, doubtless, by the opisthotonos. When the symptoms had plainly begun to yield, the ice was discontinued; particularly as, about that time, tendency to free perspiration began to manifest itself. Very shortly after discontinuance of the cold, two marked exacerbations occurred—at a time when these had greatly abated; but as there was no recurrence, I did not think it necessary to resume the application.

4. Of the three anti-spasmodics formerly enumerated, I was afraid of the tobacco, in so young a patient, having both seen and heard of its unmanageable action. Few will deny, that, with every precaution in its use, it has again and again seemed not remotely connected with the fatal issue, more especially in urgent cases of hernia. Of the aconite I had no experience, as an opponent of spasm. Of the cannabis I had; having used it in private practice. Besides, the report of Dr. O'Shaughnessy's success with this remedy, in at least mitigating the sufferings in tetanus, naturally leads to a prepossession in its favor in an unprejudiced mind. I resolved to give it a fair trial. It was begun in a very moderate dose, which was gradually increased, until about three grains of the resinous extract were taken every half hour—a full dose for an adult, in ordinary circumstances, without repetition. A few doses usually induced sleep, with marked mitigation of the spasm; and on the patient's emerging from the state of narcotism, the remedy was resumed, and steadily continued until a similar result was obtained. The period of narcotism, and consequent intermission of the medicine, did not usually exceed two or three hours. The sleep was deep and unbroken, and seemed to be refreshing. It certainly was followed by no headache, or other apparent inconvenience. The eyelids were seldom, if ever, shut, as in ordinary sleep; but remained half open, disclosing the eyes, dull and upturned, and giving to the countenance a very peculiar expression. While the exhibition of the drug was at its maximum, great irritability and peevishness of temper was shown by the patient, during her waking moments; but it were, probably, unfair to attribute this to the medicine.

As the symptoms began to recede, the cannabis was proportionably diminished in dose. Ultimately, it was discontinued altogether, while yet a hardness of the abdominal muscles remained; it seeming, then to meet with comparatively little tolerance in the system, and to induce a quick and irritable state of the circulation. Throughout the whole period of its use, its effects on the appetite was most obvious; but greatest, as was to be expected, during convalescence. The craving for food, of all kinds, was stated to be, at times, absolutely voracious.

In this case the tolerance of the cannabis, engendered by the tetanus, must be apparent to every one. A slim girl, seven years of age, took every half hour—and sometimes for many hours in succession—

a dose of hemp sufficient to throw a healthy adult into strong narcotism. Also, the unfavorable effects which commonly follow experiments with it, on ordinary patients, whose ailments (if any) do not require the remedy—as headache, delirium, visions, vertigo, vomiting, palpitations, general feeling of great discomfort, &c.—seem to have been wholly absent in this case, where nature demanded the use of the medicine.

The Indian hemp I believe to be comparatively valueless, as an anodyne, as well as a hypnotic, in ordinary circumstances; and as such I would not think of administering it. Its virtue seems to consist in a power of controlling inordinate muscular spasm; and the result in this case has certainly tended to confirm that opinion. I shall not attempt to separate the various remedial agents employed; apportioning to each their share in the fortunate issue. I consider that the early amputation, and subsequent gentle treatment of the wound, may have done some good. I have no doubt that very great benefit followed on the due evacuation of the bowels. The cold to the spine may have been beneficially co-operating, perhaps in no inconsiderable degree. Yet, I am inclined to ascribe the greatest portion of the benefit to that remedy of which the system proved so remarkably tolerant—the *cannabis Indica*.

5. The fifth indication of cure was never lost sight of. From the first, very strong beef tea was ordered to be always in readiness, and to be frequently administered. As the trismus yielded, and the power of swallowing was regained, ordinary food was offered in addition, and usually was taken with greediness.

6. In the open ward of a public hospital, it is not easy to obtain quietude for the patient, and avoidance of excitement to spasmodic aggravation. I have no doubt that, latterly, many of the aggravations were attributable to the circumstance of this indication being necessarily so imperfectly fulfilled. In conclusion, I would beg to state, that I have no wish to arrogate for the *cannabis* more virtue than what may seem its just due. The case may have been of a chronic character throughout, though, in my humble apprehension, it is very far from being apparent that such was its nature. At all events, by this case, evidence as to the action of the *cannabis Indica* seems to be borne to the following effect:—

1st. It has the power—probably not slight—of controlling inordinate muscular spasm. 2d. In tetanus there is a marked tolerance of the remedy; both as regards the safe exhibition of large doses, in frequent repetition, and the absence of such unpleasant consequences as the usual dose, in ordinary cases, is apt to induce. 3d. With its anti-spasmodic virtue, in appropriate cases, it probably conjoins hypnotic and anodyne properties, though in a minor degree. 4th. It has the effect of remarkably increasing the appetite; and digestion does not seem to be impaired. The dejections, though dark and offensive, contained no unchanged ingesta. 5th. It does not induce constipation. 6th. On recedence of the tetanic symptoms, the dose

of the medicine should proportionably decrease. The tolerance is passing off, and if the original dose be continued, some of the untoward effects are not unlikely to occur.

In a case of idiopathic tetanus which occurred in Guy's Hospital, and reported by Mr. Arnold, the symptoms were chiefly those which characterize this disease, and Dr. Babington prescribed the *Cannabis Indica* as follows:—

Extract of Indian hemp, three grains; rectified spirit, half a drachm. Mix for a dose, to be taken every half hour in a spoonful of barley-water. The effects of each dose to be carefully watched. The first dose was taken at twelve o'clock. At half past twelve the pulse was 92, and intermitting. In a quarter of an hour after the second dose, the patient showed symptoms of excitement; his eyes brightened, and the masticatory muscles seemed to him to be less rigid; no priapism, but some little flushing of the face; pulse 102. A moisture on the face and hands now appeared, amounting, on the latter, to profuse perspiration, accompanied with tingling. Just before the third dose the pulse was 107, and still irregular; the rigidity, however, was decidedly less. Third dose—He swallowed better than the preceding. Fourth dose—Respiration twenty-two; pulse 128; disposed to sleep. Fifth dose—Respiration the same. He complains of pain in the back and occiput, and of lying, as it were, on something very hard; but he rests motionless, with composed features, and is drowsy. He swallowed this dose without much difficulty. At a quarter past two (fifteen minutes after taking the dose) he fell into a quiet sleep. The dose of Indian hemp was now augmented to five grains in fifty minims of spirits to be taken in barley-water every two hours. The sixth dose was taken at three o'clock. Respiration twenty; pulse 110, full and strong. He had a general perspiration, swallowed well, and said that the pain in the back and occiput was relieved; bowels not yet moved.

Ordered, at half-past four, a turpentine enema, and to continue the extract; and at eleven, p. m., twelve grains of calomel.

May 3d. Ten o'clock, a. m.—No dose had been administered from eleven o'clock on the preceding night, until two; and again at four, one was given. He has had in all forty-eight grains of the extract, up to the present time, and has now just taken another dose. He dozed all night, but had no sound sleep. Bowels still constipated. Ordered, in the afternoon, an enema of turpentine, with two ounces of castor oil. To repeat the extract of Indian hemp every hour, and to have one plaster of this material placed on the chest, and another along the spine. The patient was at this time in nearly the same state as when admitted, but complained of greater pain in the lumbar and dorsal regions. No spasm in the extremities, but some numbness in the fingers. He feels that he has less power over himself than before, and cannot now turn in his bed. Perspires a great deal

on the face and forehead, as well as on other parts; and the skin is warm as well as moist. Pulse about 80, (though it varies considerably at different times,) regular and strong. The patient does not swallow better than he did yesterday; there is a catching in the epigastrium when he swallows or speaks, though the ordinary breathing is more free than yesterday.

4th. Ten o'clock, a. m.—Bowels freely opened last night, and again this morning; motions are solid and shapeless, “just like a piece of liver” in appearance, and smell strongly of the remedy. He passed a very restless night. Great pain is induced by attempting to speak; the mouth is quite closed, and the disease appears to be slowly gaining ground; pulse 100, with less power than before. The patient complains of the medicine as burning his throat. Ordered, six ounces of wine, and to continue the extract. Two, p. m.—Spasms in the trunk have grown stronger since the morning, and increased in frequency, occurring now about every five minutes, and sometimes apparently extending down the left leg, causing violent pain throughout the whole body, and occasionally jerking the patient off his back; pulse the same. At four, p. m., Mr. Stocker saw him, and ordered the extract of Indian hemp to be administered, in an injection of a pint of beef-tea and wine. This was done at the hour of four, six, nine, and twelve, the last time with the addition of an egg; and on the 5th, at two, four, and six o'clock, a. m.

5th. Eleven, a. m.—The injections have all been retained. He got a little sleep, at intervals, during the last night, and says that he is in less pain than yesterday, yet still complains of much pain about the mouth. The muscles of the face are less contracted, and the teeth can be separated to the width of about a quarter of an inch. He has a control over his arms and legs, and can draw the latter upwards; spasms less violent, though more frequent, occurring every two or three minutes; bowels confined; pulse about 100; more feeble; breathing easy. Ordered, four ounces of brandy, with two eggs, in a pint of beef-tea, and a little decoction of starch, to be administered as an injection, every four hours. This was done at eleven, a. m., two, six, and eleven, p. m.; and on the 6th, at two, half-past five, and ten, a. m.

6th. Three, p. m.—Injections retained. Very restless all the past night; complains of feeling cold this morning, and drowsy; could not sleep, however, for the spasms, which have become stronger; there is more difficulty of breathing; but he retains the free use of his arms and legs. His mind has wandered at intervals during the day, but he now answers questions rationally; pulse 110, with some sharpness; much less perspiration to-day. He had, a little while since, requested to have a little brandy in barley-water, but the first gulp of it brought on a violent spasm, that prevented its being swallowed. Complains of the light and noise of the ward.

7th. Half-past twelve, p. m.—The injections have been continued. He craves after brandy, and the previous night some was given

in water, which he contrived to swallow; his mind rambled during the night, as it has during the day, but he answers questions rationally; perspiration returning, and spasms diminished; he can open his mouth better; pulse 120; bowels still constipated. Ordered an enema of turpentine and castor oil, as before, and to continue the Indian hemp. Two, p. m.—one injection had returned; the rest were retained. At 6 o'clock Mr. Stocker visited him; the spasms were again more frequent; the thoughts of the patient still wandered, but he protruded his tongue when told; pulse 160; powers rapidly declining; and at half-past two the next morning, May 8th, he died.

The exact quantity of the extract of Indian hemp administered, whether by the mouth or per anum, is ascertainable from the dispensary book, which shows that the following quantities were made up for this patient:—

May 2d. Eleven, a. m., twenty-four grains. Four, p. m., twenty-four grains.

3d. Nine, a. m., twenty-four grains. Four, p. m., forty-eight grains.

4th. Ten, a. m., forty-eight grains. Ten, p. m., twenty grains.

5th. Seven, p. m., forty-eight grains

6th. Ten, p. m., forty-eight grains. But, of the last named quantity, thirty-six grains remained after the patient's death. It thus appears that the total quantity taken amounted to two hundred and forty-eight grains. It was obtained from three several sources, in nearly equal proportion—viz: the first from Mr. Squire, of Oxford-street; the second, through Mr. Pearce, from a gentleman who brought it from India; and the third from Mr. Rouse, in the Borough. The gentleman who supplied the second portion tested the effects of one grain on his own person: it produced the symptoms of intoxication, with the excitement common in that state, to such a degree, that it was found necessary to call in medical aid—a sufficient proof of the potency of his specimen of the extract.

Mr. Potter, of Newcastle, thinks that the power of Indian hemp in spasmodic affections is not sufficiently appreciated; and publishes a case of traumatic tetanus, in which it was used, and seemed to possess great control over the tetanic spasms. The patient had received a severe laceration on the upper part of the right thigh, which exposed the femoral vessels. Everything went on well till the twelfth day, when symptoms of tetanus appeared. A large dose of calomel and Dover's powder was then given, followed by ten grains of extract of Indian hemp, repeated every two or three hours. As his bowels were confined, two drops of croton oil were placed on the tongue, and an injection given made with

Tobacco leaves, one scruple; boiling water, eight ounces; macerate; strain for an enema. These produced free action of the

bowels. In consequence of the difficulty in swallowing, I determined to give the extract in the form of injection, and therefore ordered him to have the following enema every two hours:—Extract of Indian hemp, one scruple; strong beef-tea, six ounces: mix. This was done, and the injections retained. No violent spasmodic actions took place, but the back became gradually more and more arched, so that it was necessary to place a pillow beneath. The extract did not cause any marked symptom of intoxication, though it evidently produced, at intervals, calm sleep. Without suffering any pain, the disease gradually progressed, death taking place on the fourth day after symptoms appeared. In this case, four drachms and two scruples of the extract were administered, and to the action of this medicine I attribute the freedom from pain and clonic spasm, which surely is sufficient to induce any one to give this remedy a full trial in so fearful a disease.

The following case of idiopathic tetanus is given by Dr. Newbigging:—The patient was a baker, who, while perspiring profusely, went out to chop wood, at a time of intense cold. In the evening of the same day he complained of tetanic symptoms, which gradually increased. Dr. N. saw him first a week after the attack. The pulse was natural; bowels constipated; urine scanty. He was bled to 12 oz.; a drop of croton oil was administered, and a large blister was applied to the upper part of the spine. The bowels were opened by the oil, and he felt altogether relieved. Three days after, he was again bled to 14 oz.; and a strong dose of morphia with 30 drops of tinct. cannabis ind. were given at bedtime. Three days after this, spasmodic action had commenced in the limbs; the dose of morphia was then increased, and ordered to be given four times a day, and elaterium to be used as purgative. Next day, croton oil was again had recourse to, the elaterium having proved ineffectual. Dr. Abercrombie, at the same time, recommended the use of arsenic, which was given with the morphia. He continued to improve for a week, when he was suddenly seized with great dysphagia and tremors, which were soon removed by placing him in the erect position. His medicines having been discontinued for two or three days, were renewed. About five weeks after the commencement of the attack, he expectorated a quantity of pus mixed with mucus, which expectoration continued three weeks. He had afterwards thickening of the spinous processes of the cervical vertebræ, and was attacked with anasarca, which was subdued by diuretics, actively administered, and in about three months he was able to return to business.

The principal features of interest in this case of what is considered

a rare disease in this country, are, the gradual affection of the different muscles of the body, commencing with those of the jaw, and the successful issue of the treatment, which, however varied, may be considered to have resulted from the persevering employment of croton oil and opium; for although arsenic, Indian hemp, colchicum, &c., were administered to him at different periods, I believe, to none of these was so much benefit attributed by us—and he was occasionally visited by Dr. Abercrombie, Sir George Ballingal, my father, and Dr. Duncan—as from the exhibition of opium in full doses, with the occasional use of croton oil; for, whether we consider this medicine to be endowed with any specific effect or not, as reasoning from somewhat analogous cases of nervous affections I feel disposed to do, it certainly seemed to be followed by greater relief to the tetanic symptoms than when an ordinary purgative, such as scammony, gamboge, &c., was exhibited. I have occasionally observed benefit from the Indian hemp in allaying irritation and causing sleep, particularly when opium was contra-indicated; but I am somewhat doubtful of the value of this remedy in tetanus, and am disposed to think, that no case where opium is so decidedly indicated can be benefited by the administration of hemp, if the former powerful remedy has failed to be of service.

Large Doses of Opium in the Treatment of Fevers and Inflammatory Affections.

In the August No. of the *Missouri Medical and Surgical Journal*, we find an interesting article by A. G. Henry, M. D., of Pekin, Illinois; on the treatment of Fevers and Dysentery with large doses of Opium: and in the September No. of the same Periodical, Prof. Thomas Barbour, M. D., of Kemper College, St. Louis, continues the subject. After congratulating the profession on the appearance of Dr. Henry's communication, who gives opium in four to six grs. doses in fevers and dysentery, Prof. B. says—

There are two propositions which, I suppose, every accurate observer will admit to be true, and if true, will afford a satisfactory explanation of the utility of full doses of opium in febrile and inflammatory affections: 1st, That all the phenomena of the initial stage of miasmatic fevers, and, I may add, of the acute phlegmasiæ, clearly demonstrate that the first link in the chain of disordered actions which constitute fever or inflammation, is a morbid impression on the nervous system, the immediate effect of which is exalted sensibility, or *irritability*, of which the successive events are necessary sequences:

2d. That it is of paramount importance to control the nervous system—the “the primum mobile”—the mainspring which gives us to all the complicated actions that make up fever and inflammation; and that, in proportion as we do so, shall we be able to modify the results of its action on the vascular and secretory systems.

The generality of practitioners attempt the accomplishment of an important object referred to, by the use of agencies calculated to subdue the effects of an unduly excited nervous system, and thus too often prostrate the powers of life; the object of the opiate is to be in connection with such agencies, to a prudent extent, to directly modify and control the fountain of vital action, in order to obviate its effects upon the animal economy, without the necessity of so great an expenditure of the resources of nature.

Having these principles in view, I have been in the habit, during the last four years, of using large doses of opium—say, 3 to 5 grs. in all the various modifications of fever, for the purpose—1st, of counteracting the febrile periodicity; 2d, of promoting the reaction of the powers of nature; 3d, of diminishing excessive evacuations; 4th, of quieting nervous irritability, and thus guarding against local congestions and inflammations; and, 5th, of shortening the course of fever. I have not regarded this valuable agent as the “febrifugum æthereum,” to the neglect of any of the remedies of acknowledged efficacy; but have used it as a powerful auxiliary to those means, and acknowledge that the effects have been most gratifying. The conditions in which I have used full doses of opium, say from 3 to 5 grains, are the following:

1st: Simple Intermittent.—I administer it—say 1 dr. tinct. op. or 30 to 40 grs. of Dover’s powder, either alone, or in connection with calomel and quinine, in the latter part of the apyrexial period, to prevent the recurrence of the paroxysm; and in the cold stage, to shorten its duration, and lessen the violence of the succeeding hot stage. So frequently have I succeeded in warding off a chill by the use of opium, together with warm stimulating drinks, that if quinine could not be obtained, I would place more confidence in it as a substitute than any other agent with which I am acquainted.

2d: Remittent Bilious Fever.—Having bled, if necessary, or administered an effectual mercurial cathartic, it has been my practice for several years, to give a full opiate—say, 3 to 5 grs. of opium, or from 30 to 40 grs. of Dover’s powder every night, or every other night, with 10 to 20 grs. of calomel. I am not deterred, generally, from its use, even when those conditions exist which authorities declare to be contra-indications, namely, red and dry tongue; dry skin, excited pulse, and moderate cerebral disturbance, provided the liver is acting, and the bowels have been freely opened. Under such circumstances, instead of an aggravation, I have generally witnessed a decided amendment. Nor should this excite astonishment, when it must be conceded that, most generally, all of the above phenomena occurring in the early period of fevers, are dependent on high

nervous excitement, and not on an inflammatory condition of the vessels. Even in the latter stage of remittent, and typhoid and typhus fevers, when there are unequivocal evidences of cerebral inflammation, after general and topical blood-letting, cathartics, refrigerants to the head, and revulsives to the nucha, we are justified in the use of large doses of morphia or common opium, as no other remedy will so effectually relieve the restlessness, jactitation, subsultus tendinum, and other urgent symptoms, and impart reactive energy to the nervous system. Indeed, opium and stimulants constitute the sheet-anchor of hope under such circumstances. For this purpose, the following combination is an exceedingly valuable one:—*R.*: Mist. camphoræ, 4 oz.; moschi, $\frac{1}{2}$ dr.; antim. tart., grs 2; morph. acet., 3 to 4 grs. Dose, a table-spoonful every 4th or 6th hour.

3d: The Congestive modification of Intermittent or Remittent Fever.—Opium is a most valuable adjuvant in these cases, in order to the developement of full reaction. Its mode of operation is difficult of explanation; I suppose, however, that it tends to equalize the circulation, by allaying the excessive nervous *excitability*, which rapidly induces exhaustion. For the above object, I would *especially* recommend the following preparation:—*R.*: Opii, 2 oz.; camph., capsic., cinnam., ol. caryophyl., *aa* 1 oz.; Hoffman's anodyne liquor, 1 pint. Dose, 1 dr., equal to 4 grs. of opium, every fourth or sixth hour, in connection with calomel, quinine and revulsives. Its effects are often wonderful.

In the treatment of both intermittent and remittent fevers, during the past sickly season, I have used the two following prescriptions *with the very best effects*: 1st—*R.*: Hydrarg. chlor. mit., 1 dr.; opii, 24 grains, made into 24 pills, of which I have given four every night until slight mercurial action is induced: two doses are generally sufficient. 2d—*R.*: Mass., hydrarg., sulph. quinæ, *aa*. $\frac{1}{2}$ dr., made into fifteen pills, of which I have given two every two hours during the intermission or remission. Among the many cases that have come under my care, very few have continued beyond the third or fourth day.

4th: Puerperal Fever.—After copious blood-letting, our chief reliance should be placed on opium in large doses, combined with calomel—say 4 to 5 grs. of the former with 10 of the latter, to begin with; then 2 grs., each repeated every two or four hours, until the abdominal pain is relieved. I believe that the full developement of this dreadful malady may, generally, be prevented by opium thus administered, together with hot fomentations.

5th: Acute Rheumatism.—In the treatment of this painful affection, I would especially recommend the following combination, after one full bleeding:—*R.*: Rad. colchici p., $\frac{1}{2}$ dr.; antim. tart., grs. 3; morph. acet., grs. 3, made into twelve pills, of which two may be given every fourth hour, until relief is obtained.

6th: Acute Pleurisy.—After one full blood-letting, the best means of relief in acute pleurisy is a full dose of opium, in combination with

calomel and tartarized antimony. The following is a convenient mode of administration:—R. : Opii, hydrarg. sub. mur., aa., grs. 12.; antim. tart., grs. 2, made into 6 pills, of which two may be given at first, and afterwards, one every two or four hours. With this mode of practice, it will rarely be necessary to bleed a second time.

7th : Acute Pneumonia.—In pneumonia, the full doses of opium are of great value, after full blood-letting, but they should be used only once in twenty-four hours; the calomel and antimony being used, as is customary, at short intervals.

8th Gastritis.—After free, general and topical blood-letting, my reliance is on opium and calomel; 4 or 5 grains of the former with 2 of the latter at first, then 1 to 2 grains each, every two hours, with cold drinks, purgative enemata, hot poultices, and a blister, in the severest cases, over the epigastrium.

9th : Enteritis.—In this form of inflammation, so rapidly fatal is its tendency, after free general blood-letting, I would resort, with great confidence, to opium in the fullest dose, 4 to 6 grains, combined with 1 to 2 grains of calomel, after which, 1 to 2 grains of each may be safely given every two hours, with oft-repeated hot poultices, an occasional mild aperient, as castor oil, and a large vesicatory, after the more acute symptoms are relieved.

10th : Acute Dysentery.—If there is much fever present, with great abdominal tenderness, I think it safest to commence the treatment with one full blood-letting, after which, 35 or 40 grains of Dover's powder, or, if the stomach is very irritable, 4 grains of pulverized opium, with 5 to 10 of calomel, mixed in an ordinary dose of castor oil, is the best remedy I ever used. If there is no necessity for bleeding, the above portion may be administered at once; and not unfrequently, it will relieve the disease without other means: generally, however, it will be necessary to continue the use of 2 grains each of calomel and opium every four or six hours, until the abdominal tenderness, tormina and tenesmus, are removed. As auxiliary to the above, mucilaginous drinks should be freely allowed; occasional portions of castor oil, or oleaginous mixture, should be given, and anodyne injections, as tinct. opii, 1 dr.; assafoetid., $\frac{1}{2}$ dr., in aqueous solution, repeated twice or thrice daily. When the more acute symptoms are relieved, and there exists chronic irritation, with copious mucous and bloody discharges, I use, with great efficacy, the acetate of lead, combined with opium, in the proportion of 5 to 10 grains of the former to 2 of the latter, every six or eight hours; and if the disease persist under this course—and especially, should there be tympanitis, I would recommend a large blister, and the following mixture, which is applicable to the chronic stage of mucous inflammation of the whole alimentary canal, whether it be gastritis, ileitis, or colitis:—R. : Mist. camph., 4 oz.; tinct. opii acet., 2 dr.; acid. nitric., $\frac{1}{2}$ dr.; spirit. terebinth., $\frac{1}{2}$ oz.; dose, a dessert or table-spoonful every four or six hours.

In conclusion, I will express the hope, that all medical men who

may read this, or Dr. Henry's paper, may so far confide in our judgment, and the results of our experience, as to give a *fair* trial to the use of opium, as recommended in fevers and inflammatory affections; if so, I do not doubt but that the testimony of all would tend to *establish* the safety and value of the practice. It is a subject of vital interest, and is worthy of the candid investigation of the whole profession.

PART III.—MONTHLY PERISCOPE.

Source of Convulsions.—By T. WILKINSON KING, Esq. It is a little remarkable, that hitherto there has been no settled opinion in the profession, as to the primary seat of derangement in convulsive affections. Dr. Hall and some others, seem to refer the spasms to general disorder of a specific nature in the spinal marrow. Others impute them rather to meningeal or to superficial affections of the cerebrum.

Convulsions, which leave the patients as well as ever, even after many attacks, cannot be expected to have any visible permanent local alteration connected with them.

In the first place, I shall proceed to show what I have concluded the pons varolii has to do with convulsions—for, here, all motor tracts converge—and, here, one thrust, as it were, may stir up every muscle of the body. I assume that no affection of bone, nor, indeed, any meningeal affection, necessarily affects brain or nerve, and I could almost add no tumour. I see that all the affections here named begin and go on to a great extent without nervous symptoms, and that the signs of nerve-disease, when they do supervene, proceed independently, and without any strict relation of duration, degree, or consequences, to the extraneous disorder. I find, moreover, two sets of real nerve disorders, *i. e.*, 1stly, with a palpable cause and a definite site; and, 2ndly, devoid of visible local change; and I cannot doubt but that some of the latter are fairly illustrated by the former. A new and gradual growth deranges no new fibre—a strumous tubercle in the thalamus gets large, unsuspected; and consequent affections of the opposite arm come and decline variously, according to the varying incidental changes in the brain, around the tubercle. Such a body, in a renovated constitution, rather wastes, turns to cholesterine and may be unheeded through a long life. Strumous, cancerous, inflammatory, and apoplectic diseases of the brain are occasionally found to become arrested at every stage of their course, as when wasting or other disorders, elsewhere, come into greater activity.

On the other hand, I think it is, in the main, pretty certain that cysts, tumours, inflammations, softenings, extravasations, whose size or extension may gradually encroach on the pons, induce convulsions

before the final coma—a certain state of injection, or nutrition, or of nerve-irritation, preceding total oppression.

Every known disorder of the spinal cord causes lesions of motion (rigidity, spasm, or palsy) and of sense (pain darting, or numbness) in proportion to its severity, and only in parts below the seat of the disorder; but, if these affections involved the excitator cords of some physiologists, surely we should have universal disturbances. The convulsions of known spinal diseases are all comparatively limited or insignificant. To what nervous lesions do we not look, for most general palsy, or tremor? As disease approaches the centre of the pons, so general convulsion or fatal paralysis attends. Slow tumours thus indicate the site of the transitory actions which cause convulsions. The same diseases in the cerebrum, cerebellum, and spinal marrow, cause no general convulsions. These assertions I hope to make good. If any one should think he can do as much in opposition, I can only wish to see it.

1. There are various diseases of the cerebrum, which approaching the pons varolii, produce convulsions, first of the opposite side of the body, and then generally.

2. There are various diseases of the cerebellum, which, gradually advancing upon its cura, &c., cause convulsions, first of the opposite side of the body, and then generally.

3. There are various diseases of the tuber annulare itself, which, in their course, usually set up universal convulsions.

4. There are some exceptions to the above statements, but the consideration of them rather illustrates than refutes the main principles advanced.—*Medical Times*.

On the Explanation of the Difference in size of the Male and Female Urinary Bladder.—By JOHN LECONTE, M. D., of Savannah. The fact that the urinary bladders of women are considerably more capacious than those of men, has been observed by anatomists from the earliest ages. This was attempted to be explained by supposing that the conventional rules of society, together with the sedentary habits of females, rendered extraordinary distension of that viscus from protracted retention of urine, more frequent and extensive among them,—and thus the organ became enlarged mechanically.

This explanation appears to be exceedingly plausible. Indeed, it has found its way, as if by general consent, into almost all our standard works on anatomy and physiology.

It seems that no one has heretofore noticed the unquestionable fact, that the *same difference* in the size of the bladder, in favor of the *female*, obtains in many of the *inferior animals*; where, of course, this cause cannot be presumed to operate in the slightest degree. It most assuredly does exist in the hog, the sheep, and the cow. I have remarked it so often among these animals, as to be able to select out the bladders of the females from among a number of others of those of both sexes. In view of this established fact,

therefore, the received explanation becomes at once untenable. We must, therefore, seek for a more rational explanation. Let us appeal to nature—let us see how she accommodates herself to circumstances. It is well known to every observant surgeon, that when the urethral passage is constricted from any cause, whether mechanical or the result of disease, the bladder very soon diminishes in capacity, and becomes contracted and thickened. This occurs when there is no disease of the bladder itself, and when that of the urethra has completely subsided, leaving nothing behind but a mechanical obstruction of the passage. Now, what is the deduction to be drawn from this natural process? The conclusion seems to be inevitable, that the *diminution of the capacity of the bladder*, under such circumstances, is an *expedient* of nature to meet the exigencies of a *contracted outlet*. Herein, I think, we are furnished with a clue to the *true explanation* of the difference of size of the male and female urinary bladder, when every thing is in a normal state. The female *urethra* is not only *larger* and more dilatable than that of the male, but is also shorter and straighter. It is generally of uniform diameter, varying from three to four lines, slightly curved, with the concavity looking upwards, and so extensible that calculi as large as walnuts have been known to pass. (Vide Lond. Lancet, 1841-'2, vol. 1st, p. 588; also vol. 2d, p. 41.) Now, as we have shown that the size of the *bladder* is in proportion to that of the *urethra*, it follows, *a priori*, that the male must have it smaller than the female; a process of reasoning which has the advantage of being equally applicable to many of the *inferior animals*. In this, nature has not departed from her ordinary hydrodynamical laws; the size of the *outlet* is proportional to the capacity of the *reservoir*, and *vice versa*. Perhaps, it may not be beyond the resources of the analytical mathematician to deduce the capacity of the bladder from a single measurement of the diameter of the urethra! At any rate, a *formula* might be easily obtained from hydraulics, which would give us approximative values, not only of the size, but also of the contractile force of the bladder!

It will be observed, that one of the conditions induced by a constricted state of the urethral passage, is a marked augmentation in the *thickness* of the coats of the bladder. I consulted Dr. Alban Goldsmith, so well known in the treatment of diseases of the genito-urinary apparatus, whose skill and long experience in these affections entitles his opinion to great consideration. He informs me, that he has had numerous opportunities of observing the changes which are wrought in the bladder by obstructions in the urethra. He finds that the organ diminishes in size, and that all the coats are affected, but particularly the *muscular*; the fibres growing fleshy and strong, are collected into bundles, giving the surface a fasciculated appearance. This strengthening of the coats of the bladder, seems to be another *device* of nature—in addition to the diminution of capacity—to increase the propulsive power, which is required to force the urine through a small outlet. In accordance with our preceding

mode of reasoning, we should be led to expect that the urinary bladders of *male* animals should *also* possess a greater degree of *muscularity* than those of *females*. So far as recollection serves us, we think that such is actually the case in *nature*; and we venture to predict, that minute measurement and close inspection *will* demonstrate that the urinary bladders of *male* animals are both *thicker* and *more muscular* than those of the opposite sex.

Why the urinary bladders of the females of many animals,—and as a natural consequence, the urethra,—should be larger than those of the males, is a problem which admits of a far less satisfactory solution. The supposition most in accordance with design, is, that a greater quantity of *urine* is secreted in the female.* This idea seems to be fortified by the anatomical characters of their system, in which the *fluids* appear to bear a greater proportion, and which predominance has been supposed to have some necessary connection with the functions of reproduction. But, of course, this question can only be settled by an appeal to experimental determinations of the relative amounts of urine secreted, under the same circumstances, by either sex. At any rate, be this last conjecture right or wrong, we trust that we have established beyond a reasonable doubt, that the disparity in the size of the organ in the sexes, is a *natural* conformation, and *not* the result of mechanical distension.—*Transaction of the Society of Alumni of the College of Physicians and Surgeons of N. Y.*

Castration, when two years old, in a man now quite aged.—In the Hotel of the Invalides is a man aged 71 years, who was castrated at Sens when two years old, by a villanous quack, to cure him of hernia. This mutilated person is of small stature, his extremities are slender, his bones feeble, his voice sharp, and his chin without beard. He does not detest women, but when near them has only fugitive desires, and his enjoyment in coition has always been scarce appreciable. His penis, like all organs which do not perform their functions, is atrophied, and the prepuce is much longer than the gland. In this stunted body, which has evidently been arrested in its development, there has nevertheless been energy and courage. This individual, though exempt from military service, joined the army—he was in the wars of the French Empire, and the scars which he bears are authentic certificates of his ardor in battle, and of his bravery. At present, one is struck in passing his bed, with all the traits of an old woman. Notwithstanding his advanced age, his memory is good; he relates, with precision, the events in which he assisted, and his language is

* Since the above was written, this point has been clearly demonstrated by the experimental researches of Dr. Wm. Prout and Mr. Alfred Bequerel, of Paris.
J. L. C.

expressive of much goodness of heart. Every thing about him breathes the air of sadness and the impress of a vague melancholy; a regret attaches to each step of his life, and which has its origin in the dreadful mutilation to which he was made to submit in childhood.

(*Journal des Con. Médico-Chirurgicales.*)

Re-union of divided Nerves.—M. Marjolin takes great pleasure in relating an operation which he witnessed, where the surgeon, M. Michon, found it necessary in extirpating a degenerated mass, to include more than an inch of the trunk of the sciatic nerve. Paralysis of all the movements of the limb ought to have been the consequence. Nevertheless this person, after his cure, recovered such a degree of muscular agility, that he could dance and waltz as formerly.

In the Provincial Medical and Surgical Journal, Dr. Oke reports a case, where he had to cut the musculo-cutaneous nerve in operating upon a necrosed humerus. This brought on paralysis instantly of the movements of the right hand. This patient was an excellent scribe. He took lessons for four months to learn how to write with the left hand, at which time he began to feel movements in the fingers of the other, and in a few weeks he had so far recovered, that he could write well with both hands.—(*Jour. des Con. Médico-Chir.*)

Reproduction of a portion of the lower Jaw-bone with Teeth.—By E. S. BENNETT, M. D., of Charleston, S. C. Early in the month of March, 1845, I was requested to visit, professionally, a negro child about thirty months old, the property of Col. J. L., of our city, who was reported to have a singular appearance about the mouth, resembling a piece of bone growing from and connected with the inferior maxillary, preventing the child from mastication, and it could only take fluids, and that but sparingly. I found the child in an extremely emaciated condition—having been suffering for five months; upon examining it with some care, I found the bone (inferior maxilla) in a state of *necrosis*, extending from the canine tooth on the right side, along the whole bone on its entire aspect, to the articulation on the left. The anterior portion of the bone had been raised from its natural position, and becoming elevated as far back as the ramus on the left, and its point, which was rough and very rugged, fixed in the soft parts on the right side of the corner of the mouth, and from this state of irritation an extensive and frightful ulcer was developed. The only question suggesting itself was, whether the child, in its then emaciated condition, could survive the operation; the chances I considered as equal, and determined upon dilation of the soft adhering part within the mouth, and removing the

whole mass, which was accordingly done, and with a pair of strong curved forceps, the bone was seized as far back as the bend, and by a careful rotary motion of the hand, the disarticulation was accomplished, and the bone removed. Within a few days a decided pleasing improvement was observed; and in four weeks, I was enabled to return the little sufferer to the country.

It may be asked, and with propriety, what was the exciting cause of so frightful state of things?—had the child taken mercury in any of its forms? I think I may safely say *no*; having been myself in attendance on the plantation for ten years, and can safely say *none*; but the disease may be, and probably was, *sui generis*, or the result of some local hyperemia—the result of the process of dentition.

This case settles the question definitely as to whether nature of herself is capable of reproducing the bony structures entirely; in this case, not only the whole bone has been reproduced, but dentition also—being now armed with two formidable grinders.—*American Journ. of Dental Science.*

A new hæmostatic means—sheep brains.—M. Dupuy, at the sitting of the Academy of Medicine in Paris, 17th June, stated, that the cerebral matter of sheep possessed in a very high degree the property of coagulating the blood, and of immediately arresting hæmorrhages. A small portion of the brain injected into the femoral vein of an animal produced death in a few minutes. The blood was found coagulated in the heart, and in the vessels, as M. D. had predicted. He thought that surgeons might profit by this fact.—(*Journ. des Con. Médico-Chirurg.*)

A new operation for defect of rectum in the infant.—M. Baudelocque proposed to the Academy of Sciences on the 26th August, a new operation, as a substitute to opening the colon either in the lumbar or iliac regions, when the infant at birth is found to be deprived of a rectum. The absence of this intestine being established, it is necessary at first to dilate the natural anus by prepared sponge, then to introduce a speculum two and a half inches long; at the sacro-vertebral angle the cul-de-sac of the descending colon will be found, and may be seized with a tenaculum. If this cannot be done, then an incision is to be made in the linea alba of the abdominal wall, and the cul-de-sac of the colon carried down to the natural anus, to which it is to be attached by sutures.

We find this proposed by M. B., in one of the last numbers of the *Journal des Connaissances Médico-Chirurgicales*. We are not disposed to place a very high estimate upon it, for the operation, as

described, we do not hesitate to say cannot well be performed without opening the abdomen. In the first place, infants having a malformation or defect of the rectum, have also generally an imperforated anus. Secondly, there would be considerable difficulty to dilate a passage from the anus to the sacro-vertebral junction for a speculum. Thirdly, when arrived at, who could distinguish, at this depth, the descending colon from the surrounding tissues? Still, however, we confess we have no objection, in defect of the rectum, to opening the abdomen in the linea alba, if by this operation, the intestine can in any way be attached to the anus.

The employment of Blisters in acute diseases of the Brain. By Dr. TRITSCHLER.—Blisters are frequently used, and applied to all parts of the body, except the frontal region, which, according to Dr. T., is the best place to make them act in acute affections of the brain. He covers the whole frontal region, and even the root of the nose, by a vesicatory, and remarks, that besides a free suppuration produced by it, there is generally a copious flow of mucous from this organ. We learn, too, from the *Journal des Connaissances Médico-Chirurgicales*, that the physicians of the Parisian Hospitals employ these blisters with success against cerebral symptoms in severe fevers. The application of a single one is not sufficient to disfigure a patient.

Formulæ of Alcaline Medication. By M. DEVERGIE, Physician to St. Louis Hospital, Paris.—At the close of an article by M. D., in the *Bulletin Général de Thérapeutique*, on the Alcaline Medication for diseases of the Skin, we find the following prescriptions:

Artificial water of Vichy: R. Bicarbonate of Soda, 31
Spring water, pint, 1½

To take in two portions during the day. The dose of the bicarbonate may be increased to 2, 3, or 4 ℥ each day; it is proper then to augment the water to 3 or 4 tumblers. Gaseous or the Soda water of the shops, will make this drink more agreeable.

Alcaline Syrup. R. Bicarbonate of Soda, gr. xv.
Syrup of Sugar, . . . ʒ x.

Dose, a table-spoonful, morning and night, in a fourth of a tumbler of water. For an infant, a tea-spoonful is the dose in the same quantity of water.

Alcaline Potion. R. Bicarbonate of Potash, . ʒv.
Infusion of Linden, . . ʒiv.
Syrup of Mucilage, . . ʒi.
Distilled water of mint, gtt. xxv.

Dose, two or three table-spoonfuls each day for an adult.

Alcaline Wash. R. Carbonate of Soda, ʒss.
Water, O. 1½

More active Alcaline Wash. R. Carbonate of Soda, ʒvi.
Common Salt, . ʒii.
Water, O. 1½

Alcaline Liniment. R. Carbonate of Soda or Potash, ʒi.
Olive Oil, ʒiv.
Yellow of egg, one.
Moisten the carbonate before adding the oil.

Weak Alcaline Ointment. R. Carbonate of Soda, gr. x.
Lard, ʒi.
The carbonate may be increased to 4 or 6 ℥, when a more active ointment is desired; and ʒ 4 of slacked lime may be added—using then the carb. of potash.

Alcaline Bath. Carbonate of Soda or Potash, from a half to a pound.

Alcaline and Tonic Bath. R. Carbonate of Soda, from a half to a pound; Common salt, 1 to 2 pounds. Gelatine or soap may be added to this.

When sulphur is added to the alkaline preparations, the latter have only a secondary place in the composition.

Poison by Tartaric Acid.—It has been questioned if this acid be a poison. Pommer and M. Orfila are for the affirmative; Coindet and Christison for the negative. The following fact strengthens the opinion of the two first named: Wm. Wats, being affected with rheumatism, applied the 7th Dec., 1844, to Charles Watkins, druggist, to purchase 2 ʒ of Epsom salts. Before leaving, the thought suddenly occurred to him of changing it for another salt less bitter. This was granted to him, and having returned home and dissolved the new article given him, he swallowed it. His face, some moments after this, became red. He cried out he was poisoned, and then ceased to speak. Other symptoms were developed, and Mr. Wats died on the 16th. Mr. Brood, charged with the examination of what remained in the glass from which he had drank, recognized Tartaric Acid. The apothecary, Mr. Watkins, confessed his error, and attributed it to the change which some one had made of the bottle of the acid, for that commonly occupied by an insipid salt.—(*Pharmaceutical Journal.*)

Lithontriptic action of the Uva Ursi. By Dr. FENOLIO.—An old calculous patient had fever, and experienced severe pain in the bladder. He would not consent to be sounded. Dr. F. prescribed a decoction of the *uva ursi*, prepared thus: R. Uva Ursi, ʒss.; Water ʒix. Boil for fifteen minutes; strain, add syrup of gum, 3v., and take the whole in three doses. After using this tea for three days, the patient passed 13 pretty large gravels, and in five days more, 90 others. The whole formed a considerable mass. His suffering and fever disappeared.—(*Jour. des Con. Médico-Chir.*)

Treatment of Dysmenorrhœa.—Dr. Rigby, in his treatise on this subject, considers that it depends, in common with some other uterine affections, on derangement of the assimilating processes which may be merely “the local phenomena of a general condition of the system.” This general condition, he thinks, is chiefly dependent on a gouty or rheumatic diathesis. He generally begins the treatment with one active dose of calomel, from five to eight grains, followed by a mild purge of rhubarb or magnesia next morning. Leeches to the anus, either immediately before the menstrual period, or equidistant between the two periods, are very efficacious; but often require repetition before their full value is seen.

“The attention of the practitioner must now be devoted to the more specific treatment in the case. If the circulation be plethoric and strong, the urine scanty, high-colored, with considerable excess of lithic acid and lithates, colchicum, in the form of the acetous extract, with extract of hop or henbane, may be given at night, or night and morning, and some mild saline, with *sp. ætheris nitrici*, occasionally during the day.

“The salines, as recommended by Dr. Prout, are well worthy of attention; they not only diminish the disposition to the formation of lithic acid during the processes of primary assimilation, but allay the irritable state of the digestive organs, and the urine becomes increased in quantity and more healthy in its characters.

“Where the disease assumes the rheumatic or rheumatic-gouty character, we usually find it associated with less power of general circulation, and with local symptoms of less active character. Guaiacum and iodine are valuable remedies in these affections, either separately or combined. The tinctura guaiaci ammoniata may be taken in milk night and morning; or ten grains of pulv. guaiaci and of magnes. carb. every morning, and from two to five grains of potass. iod. with extract of hop or henbane at night; or if it be deemed unnecessary to use the guaiacum, the potassæ iod. may be given two or three times a-day in sarsaparilla with liq. potassæ, and the bowels regulated by an alterative or laxative pill at night; or, if it be desirable to promote diaphoresis, by a dose of Dover's powder.

“There are few remedies which keep up a healthy action of the liver so well as the taraxacum, especially when preceded by a dose or two of mercurial medicine. In most of the affections under consideration, where it is important to maintain this function in due activity, and yet where the constant use of mercurials is highly inexpedient, taraxacum becomes a valuable adjunct. It is prepared under a variety of forms, but I prefer the extract as being the most certain and convenient; half a tea-spoonful at night, dissolved in a little warm milk, forms a, by no means, disagreeable cocoa-like drink; or it may be taken with milk and lime-water if necessary. Besides its ordinary effect on the liver, and

therefore indirectly upon the bowels, by supplying them with healthy bile, I have reason to think that it also acts upon the skin like sarsaparilla, and for this purpose may sometimes be advantageously combined with it."

Brithwaile's Retrospect.

A Surgical Anecdote.—We find the following in the last No. of the Journal des Connaissances Médico-Chirurgicales :—One of the most distinguished surgeons of Paris, being about to operate upon what he supposed a common cataract of the eye, observed to the students present, at the close of a brilliant lecture,—Here is a cataract easy to operate by displacement. The needle introduced into the eye was manœuvred for a long time without causing the opacity to disappear. The instrument was then withdrawn, and the operator, without saying a word, turned his back upon the patient. A witty confrere, wishing to ascertain the cause of this bad humor, examined the eye, and laughingly said, "I see what it is. It appears that there has only been here a *displacement of diagnosis*."

METEOROLOGICAL OBSERVATIONS, for Sept., 1845, at Augusta, Ga
Latitude 33° 27' north—Longitude 4° 32' west Wash. Altitude above sea
452 feet.

Hrs.	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sun rise.	3 P. M.	Sun rise.	3 P. M.		
1	71	88	29 74-100	29 63-100	w.	Cl'dy, th. & light. & sprink.
2	71	82	" 65-100	" 63-100	s. w.	Cloudy.
3	72	86	" 62-100	" 68-100	s. w.	Fair. [P. M.—sprinkle
4	71	80	" 73-100	" 72-100	s. w.	Fair—thunder—light. at 5,
5	71	80	" 73-100	" 68-100	s. w.	Fair.
6	70	88	" 71-100	" 78-100	N. W.	Fair.
7	71	89	" 80-100	" 70-100	s. w.	Fair.
8	72	92	" 70-100	" 73-100	w.	Fair. [rain 2-10 in
9	72	92	" 73-100	" 71-100	w.	Fair—storm at 3, P. M.—
10	70	87	" 78-100	" 87-100	N. W.	Fair.
11	64	84	" 80-100	" 81-100	N. E.	Fair.
12	65	86	" 95-100	" 92-100	N. E.	Fair.
13	67	83	" 95-100	" 92-100	E.	Fair. [blow last night
14	64	77	" 81-100	" 66-100	w.	Variable, cl'dy, rain 1-10 in.
15	64	81	" 69-100	" 72-100	N.	Fair.
16	58	79	" 78-100	" 82-100	E.	Fair.
17	66	82	" 85-100	" 81-100	N. E.	Cloudy.
18	62	79	" 87-100	" 85-100	N. E.	Variable.
19	64	88	" 82-100	" 78-100	w.	Fair.
20	68	84	" 75-100	" 58-100	s.	Fair. [A. M. & ceased 1, P. M.
21	69	68	" 53-100	" 47-100	N.	Rain 7-10 in.—began at 3,
22	60	70	" 65-100	" 72-100	N.	Fair.
23	58	76	" 80-100	" 78-100		Fair.
24	52	71	" 79-100	" 84-100	N. W.	Fair.
25	51	72	" 87-100	" 85-100	N. E.	Fair.
26	48	76	" 82-100	" 82-100	N. E. & s. w.	Fair.
27	49	80	" 85-100	" 90-100	w. & E.	Fair.
28	52	80	" 93-100	" 93-100	s. E.	Fair—some clouds.
29	56	83	" 90-100	" 85-100	s. E.	Fair do. do.
30	59	73	" 76-100	" 73-100	s. E.	Cloudy—sprinkle.

23 Fair days. Rain, 1 inch.

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PART I.—ORIGINAL COMMUNICATIONS.

ARTICLE I.

On the Treatment of the Tertiary Symptoms of Syphilis by Hydriodate of Potash, with Cases. By PAUL F. EVE, M. D., Professor of Surgery in the Medical College of Georgia.

It is not my intention, in the present article, to enter upon the subject of the venereal disease further than, to exhibit the speedy and potent effects which the combination of Iodine and Potash has over its last or third order of symptoms.

It is known to the profession, that within a few years, an effort has been made, particularly by M. Ricord of the Venereal Hospital of Paris, to divide the constitutional symptoms of Syphilis into secondary and tertiary. The following classification of the phenomena of this disease, according to its pathology, appears now to be gaining favor with the best informed physicians :

The venereal disease employed as a generic term, embraces two distinct species—viz : Gonorrhœa and Syphilis. These do not depend upon the same virus. Gonorrhœa has probably prevailed from time immemorial, and is not accompanied with peculiar constitutional symptoms. Syphilis was first observed about the close of the 15th century, and if not aborted by treatment, almost invariably infects the system, and becomes a constitutional disease. Both, however, are contagious, and propagated in the same manner, (by the promiscuous intercourse of the sexes,) and both may exist simultaneously in the same person. One is generally confined to the mucous surfaces

of the genital organs; the other, though local at first, soon extends to nearly all the tissues of the body.

The primary symptoms of syphilis, are chancres and buboes. The matter or pus produced in these is contagious, and will transmit the same disease by inoculation. This virus may be destroyed, by caustic, (for example,) if applied within five days from the appearance of a chancre, and then no general or constitutional effects are likely to occur.*

When a bubo is the first symptom discovered, it is supposed to be dependent upon a previously existing but concealed chancre; and it will communicate syphilis, if it be genuine. Buboes may, and often do arise sympathetical or symptomatic of other diseases; but then they contain no virus, and attempts at inoculation fail.

The secondary symptoms of syphilis appear on the mucous membrane and skin, as the ulcerated sore throat, and lenticular eruption upon the surface of the body—some add alopecia, or falling of the hair, and condylomata, or tubercles about the anus and genital organs. These result from the absorption of the syphilitic virus, and are the first series of constitutional infection. They generally appear about four or six weeks after the existence of the primary symptoms. The disease cannot be communicated by any secretion taken from the second class of symptoms; but though non-contagious, still it is hereditary, descending through parents to children.

The tertiary phenomena, or third class of symptoms of syphilis, exhibit themselves in the shape of nodes, deep-seated tubercles, warts on the genitals, chronic ulcerations of the throat, rhagades or eruptions in the hands and feet, ulcerations of the nose or about the face, horny excrescences, &c. Although the system is more profoundly affected, yet the disease in these forms is neither contagious nor transmissible by inheritance. These symptoms never occur without being preceded by the primary and secondary, and seldom appear before these have existed for some six or eight months, and sometimes not until years afterwards.

To recapitulate.—1st, the primary symptoms of syphilis, chancres and buboes are contagious; 2nd, the secondary, sore throat, blotches, &c., are hereditary, but non-contagious; 3rd, the tertiary, nodes, chronic ulcerations, &c., are neither contagious nor hereditary.

* The prophylactic soap of Dr. Pfeffer used with success in St. Petersburg, contains in 500 grains of the substance, 6 grs. of bichloride of mercury, 4 of tannin, and 45 of chloride of lime, incorporated into a soap with soda. In its application, some difficulty, of course, is experienced in the female.

Not only in a diagnostical point of view, is this classification of the phenomena of syphilis important, but we shall find it equally so in a therapeutical. If nature has been followed in the description of the symptoms, and the changes from a healthy to an abnormal condition defined in the order of their appearance, we are surely in the right path to correct this state. Phenomena differing so widely as do the primary and secondary symptoms of the disease under consideration, have always been admitted to require modifications in the modes of treatment, and so indeed must it necessarily be with the tertiary. The discrepancy in reference to the best plan of curing the constitutional symptoms of syphilis, may be explained by the want of discrimination in the general classification of all these phenomena under the head of secondary. It is only during the past few years that another division has been insisted upon, and a third order attempted to be established.

Nodes, exostoses, caries of the bones, chronic ulcerations of the mucons membrane and skin, tubercles, &c., have co-existed with other symptoms of syphilis, and have all, until recently, been subjected to the same treatment. So indiscriminately was mercury employed in this disease, that the question arose, whether these very phenomena were not the sole effects of the remedy itself. In his system of clinical medicine, published in 1843, Dr. Graves, of Dublin, remarks on this subject, "notwithstanding all that has been said and done, a good deal still remains to be accomplished, before the treatment of syphilis can be said to be placed on a solid and rational basis. * * * In treating cases of primary or secondary symptoms, which have existed for some time, and where the patient has been taking mercury, it is hard to unravel the perplexities which surround the case, and ascertain whether the mercury has been properly administered or not.

"Where a patient laboring under syphilis has been salivated without being improved, one of two things must be inferred—either that the mineral has had no effect on the disease, or that it had an injurious effect on the constitution. The great point to arrive at in the treatment of syphilis, is to make the mercury act on the disease, and not on the constitution. This I have often endeavored to impress on my class. I will venture to say, that I would engage to give a patient, laboring under primary symptoms, any quantity of mercury, without producing a favorable effect on the disease, or doing him any good. I would engage to salivate a man affected with sore throat,

and yet leave him as bad, or even worse than ever. I have vindicated this occurrence over and over again, and have laid it down myself as a proposition—that the venereal may be treated with mercury, to the fullest extent, without being cured.”

Of the opposite plan of treating syphilis, i. e., the non-mercurial, it is known that a good deal was said and published, especially by some of the army surgeons of Europe, fifteen or twenty years ago. But the very favorable statistical reports then made, have not been sustained by subsequent observations and experience; it is even true that Mr. Rose, formerly one of the most zealous advocates of the mercurial plan, has not only abandoned it, but adopted the non-mercurial course of treatment.

With regard to the propriety of insisting upon the classification of the symptoms of syphilis, advocated by this article, it may be remarked that John Hunter divided the parts affected by the secondary symptoms, into two orders, and these included the second and third class of M. Ricord. In the edition of his work on the Venereal Disease, edited by Babington, (1839,) he says, the first symptoms of the disease, after absorption, appear either on the skin, throat, or mouth; and again, in the second stage of Lues Venerea, in the deeper-seated parts, as the periosteum, tendons, fasciæ and ligaments. He distinctly states the order in which these parts are affected—viz: 1st, the mucous membrane and skin, and 2nd, the internal or deep-seated organs. We may also observe, that Samuel Cooper, and others, often allude to, and speak of the secondary venereal ulcerations. Still, with scarcely an exception, their countrymen, even to the present day, admit but the two classes, the primary and secondary; we are therefore, compelled to request the reader to make the distinction, when we refer to writers in Great Britain on this subject. By the term secondary symptoms, they include all those which occur after chancres and buboes, while the French divide them into secondary and tertiary.

Of the recent contributions of chemistry, none seem to promise more in the practice of medicine than the preparations of iodine; and of these, one of the most valuable is certainly the hydriodate of potash. Its synonyms are potassii iodidum, potassæ hydriodas, iodide of potassium, proto-ioduret de potassium, hydriodate of potash or potash. Its medical properties and uses have not yet been fully ascertained. Even its dose is not satisfactorily defined; for while some give only a few grains, others have ventured to administer half

unce of the pure salt. It is generally considered to be diuretic, rative, resolvent, and deobstruent.

The introduction of this article into the treatment of syphilis, may earnt from the following extract of a report on the subject, made M. Rattier's on M. Ricord's practice:—In our researches on administration of the ioduret of potassium, we have been able to ow out the treatment of all the various forms of tertiary syphilis. ten the ioduret alone has been found sufficient for the cure; but enever any complication has happened to be present, it has reived an appropriate medication. By having recourse at one time tonics and stimulants, at another time to antiphlogistics, M. Ricord mbines the various resources of therapeutics, according to the circumstances of each case; and in some patients who, in consequence successive infections, have exhibited the disease in all its stages—imary, secondary, and tertiary—a local treatment has been directl to the chancres, the use of mercury (proto-iodide) has caused the onditionary symptoms to disappear, and the hydriodate of potash has een equally successful against the tertiary symptoms. Such is the asis of M. Ricord's treatment. If those principles, now explained, e not attended to, the physician will be apt to commit many serious rors; of which we meet with numerous examples in the assertions f those writers who have attempted to disparage the utility of the ioduret of potassium, on the ground that they have observed certain econdary symptoms resist its administration. Had a few mercurial pills been exhibited at the same time, these symptoms would eedily have vanished. In conclusion, the proto-ioduret of potassium amply deserves, in the treatment of tertiary syphilitic symptoms, all the praise which mercury is entitled to in the treatment of the secondary symptoms—with this difference, that, very seldom, or never, has it given rise to those numerous and distressing accidents which are too well known to have been frequently induced by the injudicious administration of its rival. (*La Lancette Française—Medico-Chirurg. Review.*)

M. Ricord, in his practice, commences with 10 grs. a-day of the iodide of potash, in some convenient vehicle, as the decoction of hops, &c., and increases the dose every third or fifth day, until it amounts to 36 grs. during the twenty-four hours. He has administered as much as 3ii. a day; but thus given, it is apt to produce the iodic intoxication, a certain nervous tremor of the muscles with confusion of the brain.

Cullerier's prescription is R. Iodine, gr. 1 ; Potassæ Iodid. ℥. iv. ; Aquæ, ʒi. M. This is put into a pint or quart of decoctæ sarsaparilla, and is to be given at intervals during the day. The dose of iodine may be increased to 2 grs., and that of the iodide of potass to 6 or 10 in the day.

The Reviewer, in the Medico-Chirurgical Journal, 1840, says in the mixed symptoms of cachexia, (resulting from syphilis) preparations of iodine act almost marvellously. In the rupiæ, ecthymatous ulcerations of the skin, in diseases of the bones sometimes may result from syphilis, and often do result from mercury, the iodide of potassium is highly beneficial; yet he adds, it is inconsistent and uncertain in its operations.

While we admit that preparations of mercury do oftener, or speedily, and with more certainty and permanency, cure confirmatory secondary symptoms of syphilis than any other plan yet adopted, still, in the tertiary forms of this disease, its rival, iodide of potass has decided preference. The late M. Biet, whose extensive opportunities at the St. Louis Hospital, in Paris, entitle his opinion on the subject to some respect and weight, stated "that mercury did not produce any marked effect over the syphilitic tubercula." Same Cooper, Prof. of Surgery in the London University College, says, "I doubt whether secondary symptoms are more frequent after the treatment of primary sores with iodide of potash and sarsaparilla than after mercurial treatment." James Miller, Prof. of Surgery in the University of Edinburgh, in his Principles of Surgery, observes on Diseases of Bones, "but, as a general rule, mercury, in any form is never to be given in periostitis, more especially so as to produce a constitutional effect, unless other and safer means have proved unavailing. For that mineral we well know to be as likely to cause as to cure." He gives the preference to the iodide of potassium. "Dr. Williams, of London, considers it (hydriodate of potassa) applicable to the treatment of various forms of secondary syphilis. He used it with success, in a majority of cases, in removing hard periosteal nodes, and found it beneficial in the treatment of tubercular forms of venereal eruptions. It is also considered as one of the best alternative remedies in mercurio-syphilitic sore throat." Mr. S. Cooper not only doubts which is the best mode of treatment for primary sores—the mercurial or iodide of potass. with sarsaparilla—but he is a strenuous advocate for the use of the latter in the various secondary and tertiary venereal affections. He recommends its employment

in the eruptive form, in nodes, phagedenic ulcers, &c., and these belong to the tertiary division. He generally gives from 3 to 5 grs. of iodide of potassium in decoction of sarsaparilla thrice a day. In Liston's *Elements of Surgery*, edited by Prof. Gross, of Kentucky, the latter says in a note, "it is surprising that the author has made no mention, in connection with this subject, (constitutional symptoms of syphilis,) of the iodide of potassium, so justly lauded by Mons. Ricord and some other French surgeons. For the last two years, or more, I have been constantly in the habit of employing this article in *tertiary* syphilis, in mercurial diseases of the bones, and in chronic rheumatism, in which, I am convinced, it is as much of a specific as quinine is in intermittent and miasmatic neuralgia." Dr. G. gives the article in large doses, even half a drachm, after having commenced with 10 grs. three or four times a day. He adds, "patients who have labored under nodes and nocturnal pains for months, whose health has become greatly impaired, and who have not slept soundly perhaps for weeks together, have often perfectly recovered under this treatment in less than a fortnight." In the *Bulletin of General Therapeutics*, of last year, is an article from M. Ricord, on what he terms Syphilitic Chlorosis. He states that, in his examinations of the blood taken from patients laboring under syphilis, he has found a diminution in its globules; a condition which obtains in common chlorosis. This particular state of the blood grows worse as the syphilitic infection gives place to secondary or tertiary symptoms. It may continue in different degrees after they disappear. The first conclusion to be drawn from these considerations is, that syphilis being an anemic disease, or, at least, always complicated with anemia, the antiphlogistic method of treatment is dangerous. The second conclusion is, the necessity of a nutritious diet. "The treatment that I adopt," says M. R., "consists in the combination of ferruginous and mercurial preparations, if there exist no counter-indications. When the secondary symptoms pass to tertiary, the mercurials, combined with iodide of iron, or with iodide of potassium, suffice to reconstitute the blood."

In Braithwaite's *Retrospect* for July to January, 1845, No. 10, may be found an article by Dr. Skae, taken from the *Northern Journal of Medicine*, on Condyloma. This writer refers to the *Lectures* of the late Dr. Wallace, of Dublin, as published in the *London Lancet*, who gave the name of "exanthematic primary syphilis, to the group of symptoms consisting of moist elevated patches upon the

mucous membrane of the lips, cheeks, tonsils, &c., of a whitish color, as if touched with nitrate of silver, or coated with milk, mucous tubercles about the genital organs or anus, &c.; and which are associated with the eruption on the skin. Dr. Skae says, these are curable without the use of mercury. "My treatment consisted chiefly in the application of stimulants to the condylomata; the use of astringent injections and cold washing, for the cure of the vaginal and uterine discharges; and in cases of the latter kind, the internal administration of tinct. of cantharides. In several cases, when there existed cutaneous eruptions, the iodide of potassium was given. In no instance was any mercury administered, except in the case of the woman affected with iritis." For the treatment of these symptoms, which are now classed under the head of tertiary, in the September No. (1844) of the London and Edinburgh Monthly Journal of Medical Science, Dr. Rose Cormack writes, "besides corrosive sublimate, (which he recommends in repeated small doses, largely diluted,) there are several valuable therapeutic agents, which may be given internally in the treatment of condyloma. As the chief of these, I would mention hydriodate of potash. * * * I generally prescribe three grains of the hydriodate of potash to be taken in twenty-four hours, in four or six doses, each being dissolved in several ounces of water, with or without infusion of gentian." He also recommends in syphilitic skin diseases, after repeated small bleedings, the hydriodate of potash. He says it was first employed in secondary and tertiary syphilis, by Brera, in 1821; and his example has since been followed by very many, among whom deserve special notice, Ricord, Bielt, Baumés, Wallace, Sperine, (of Turin,) Schultzenberger, (of Strasbourg,) and Guétine, (of Antwerp). In the hands of these physicians, he adds, it seems to have cured every form of secondary and tertiary venereal disease.

We give the following extract, as it bears so forcibly in favor of our position:

The report, which M. Gauthier has recently published respecting the curative power of this salt of Iodine in secondary and tertiary syphilitic affections, is on the whole highly favourable to its use. He has administered it in a vast number of cases, and has rarely noticed any injurious or even unpleasant effects fairly attributable to its operation. On a few occasions it appeared to cause a salivation; which, however, speedily ceased. Now and then, an innocuous exanthem made its appearance on the surface. In some persons it causes slight gastric irritation; but in most, the digestive functions

appear to be decidedly improved under its use. In no instance has any wasting of the body seemed to be induced by it, as has occasionally been observed with respect to Iodine. One of the most constant effects of the Ioduret is to increase the flow of the urine. It seems to pass very rapidly into this and the other secretions; its presence is readily discoverable by its well-known appropriate tests. M. Gauthier has often detected it in the saliva.

The following are the forms of the syphilitic disease in which he has witnessed the most decided curative effects. Pains of the *bones*, even when most severe, are often very rapidly and effectually subdued; nay, when caries exist, a salutary change is not unfrequently obtained. Thus in *Ozæna*, complicated with disease of the palate, or nasal bones, we seldom fail in greatly benefiting, if not in curing, the disease. In various tubercular affections of the *skin* and *mucous membranes*, the Ioduret will be found most useful. Deep ulcerations of the throat and pharynx, rhagades or fissures about the anus and nails, will not unfrequently heal up most satisfactorily, even when mercury has been previously tried and failed. It is sometimes truly marvellous to witness the decided improvement of the general health in the course of a few days, under the use of the Ioduret when judiciously administered. M. Gauthier considers that it is a most valuable remedy in many cases of mercurial cachexy: an ioduretted gargle will often serve to check salivation from this cause.

He invariably begins its administration in small doses—from two to four grains, or even less twice a day. The quantity should be doubled every third or fourth day, until it reaches 15 or 20 grains. This dose should be continued for some time; but, if it fails in producing any decided effect upon the disease, it may be increased to two scruples or even a drachm. In a few cases, he has given as much as two drachms in the course of twenty-four hours.

A solution of the Ioduret in water, to which some tincture of Iodine has been added, may be advantageously used as a gargle in ulcerated sore-throat, and as a wash to ulcers on the surface, or on the Schneiderian membrane.

The average period, during which the internal use of the Ioduret should be continued, may be stated to be from six to eight weeks. Much will depend on the gradual increase of the doses given. Many cases will remain stationary, if the quantity of the salt administered be not progressively—and this, too, rapidly—augmented.—*Med. Chir. Rev., from Observations pratiques sur le Traitement des Maladies Syphilitiques par l'Iodine de Potassium, by M. L. Gauthier.*

In the General Bulletin of Therapeutics, for January, 1845, will be found an article on the efficacy of corrosive sublimate in the treatment of the secondary and tertiary symptoms of syphilis, by M. A. Devergie, Physician of St. Louis Hospital. In this is reported an interesting case of an officer long affected by the disease, and where-

in the iodide of potassium alone, failed to produce a cure. This was finally affected by the combination of the mercurial with the iodide of potash and iron, quinine, &c. In general, M. Devergie's treatment for the secondary and tertiary symptoms of syphilis, is "a quart of sudorific ptisan, in which from 5 to 20 grs. of the ioduret of potash have been dissolved, and also to take every morning, fasting, a pill composed of guiac, opium, and a minute quantity of the corrosive sublimate. In the course of a week or so, a second pill is to be taken at night also. These medicines are to be persevered with for two, or even three months, without intermission. A tepid bath is to be taken once a week."

To that variety of the venereal disease, known as the most intractable and destructive—I mean the constitutional effects of syphilis in a scrofulous diathesis—the iodide of potash seems peculiarly appropriate. Indeed, should this fail to cure, mercury being out of the question, we may try iodide of iron or preparations of arsenic; but fortunately, the hydriodate is usually well adapted to the case.

In the use of the article, we remark a considerable difference in the dose as employed in England and France. While the English recommend it in doses of 3 to 5 grs., the French give 10 to 20 grs. a day. The preparation which I first used was obtained from Pelletier & Berthemet, of Paris. My mode of administration is to put \mathfrak{z} i of the salt into 8 ounces of water, and give a half tea-spoonful three times a-day, increasing the dose to a full tea-spoon. This will make from 10 to 20 grs. in twenty-four hours. I have thus directed the hydriodate of potash, in a goodly number of cases in private practice, and in the majority have lost sight of their issue—the result not having been reported. It is well known, that but little that is satisfactory can be derived in the treatment of the venereal disease out of hospitals. Few patients, in private practice, will submit to the diagnostic test by inoculation, and fewer still will make regular reports to the physician or surgeon of their cases. Of those I have treated with the hydriodate of potash, the following three cases have been the most striking, and exemplifies the good effect of the medicine in persons of different age, sex and color:

CASE I. Philip, a black man, aged about 50, has had syphilis for many years. When purchased by his present owner, I was requested to give an opinion as to the state of his health. He was pronounced unsound, and to be then laboring under the tertiary effects of the

venereal disease. This was in the summer of 1843. In May, 1844, he was placed under my care. He was then in a very desperate condition. His master thought his death inevitable, and only expected some mitigation of his suffering. He could scarce articulate so as to be understood; and deglutition was affected with great pain. Has had alopecia to some extent. The surface of his body in places, particularly on the forehead and breast, was covered with irregular tubercles, varying in size and shape. The frontal bone exhibited ulcerated nodosities, and the extremity of his nose was greatly enlarged. The whole of the soft palate had been removed by ulceration, and the throat presented one large irregular and offensive ulcer. Philip, it need scarce be said, had been subjected to a variety of treatment, for he was a favorite and valuable servant, being an excellent cook.

I immediately put him upon the hydriodate of potash in 10 grs. doses, in conjunction with sassafras tea, the warm bath and good light nourishing diet, such as he could conveniently swallow. The iodide was ordered to be increased to 12 or 15 grs. three times a-day, if the previous doses were tolerated. In ten days the improvement was most gratifying. He took about $\text{iii} \frac{2}{3}$ of this preparation during the treatment, and by kind attention and good nursing, perfectly recovered. He married the following winter, and may be now seen almost any day, and in all kinds of weather, driving a market-wagon in our streets. The defect of palate is scarcely detected by his speech.

CASE II. This is a mulatto man, aged 40, and a brick layer by trade. He has had the venereal disease several times, the first attack near twenty years ago. He has been for several months under the care of another physician, and been thoroughly treated by the usual method for a chronic sore throat. In November, 1844, I commenced to give him the hydriodate of potash. It was with great difficulty he could swallow the dose of 5 grs. three times a day. In a day or two the soft palate dropped off, the immense ulcer then began to heal, and in less than a month he asked permission to go to work. The quantity of the iodide used in this case was greater than in the first reported, and it had to be continued much longer. He took over $\text{iv} \frac{2}{3}$ of the hydriodate, and was under treatment two months. This patient too, had had alopecia and chronic ulcerations upon the skin. In both these cases the iodic intoxication was slightly felt, although the quantity of the preparation never reached 50 grs. in twenty-four hours.

CASE III. For the notes of this case, I am indebted to my friend, Mr. Jeter Martin, who has been acting as resident physician to our city hospital during the past summer. This patient, although not cured by the hydriodate of potash, owing, as is believed, to her inability to retain it in sufficient quantity, was nevertheless so strikingly improved by it, and that too in a very short time, and witnessed by a whole class of students in attendance, as to be worthy of notice here.

S. C., aged 17, of luco-phlegmatic temperament, and of small stature, had the misfortune to be attacked in March, 1844, with syphilis. It commenced with chancres, and being in the country, she took no medicine for the disease. In August following, she says she was covered with small yellow blisters, and in six weeks thereafter each blister had become an ulcer, and these in their turn assumed the appearance of small irregular horns.

When she arrived at the hospital, so entirely was she covered with ulcerations, that she would allow no one to assist her in moving, for fear of increasing her pain and suffering. On the 29th September she entered under the service of Dr. Garvin. Her forehead presented some five or six excrescences, projecting from half to three-fourths of an inch beyond the skin, but attached to it, (tubercular syphilida,) her elbows and knees were covered with large ulcerations, she had chronic sore throat, &c., &c.

Dr. Garvin first put her upon the blue mass, and directed chloride of soda to the ulcers. This treatment was changed to corrosive sublimate and a wash of decoction of sage, tinct. of myrrh, borax and honey. This preparation of mercury affected the bowels and had to be discontinued, and the iodide of mercury was substituted for it; the ulcers were then dressed with calomel 13 and simple cerate 13. She also took some quinine. This was the treatment pursued up to December 1st, and under which she had somewhat improved.

So evident were her chlorotic symptoms, that upon entering this month on duty at the hospital, I first prescribed the iodide of iron in simple syrup three times a day in 3 grs. doses. December 3d, the hydriodate of potash was given in the same doses, as the iodide of iron is not retained upon the stomach. December 8th, the hydriodate is increased in quantity; and on the 15th, she takes 25 grs. per twenty-four hours. Up to the 15th January, 1845, this treatment was perseveringly attempted to be continued, but no effort could succeed in getting a larger quantity of this medicine into her system. Indeed, it had frequently to be interrupted on account of the irrita-

bility of her stomach. Still her improvement was such, that her ulcers almost entirely healed up, her horny excrescences ceased to be reproduced, her throat appeared healed, she gained much flesh, and left her bed to take regular daily exercise.

ARTICLE II.

Case of Fungus Hæmatodes. By GILBERT H. WOOTTEN, M. D.,
of Florence, Ga.

The extreme infrequency of such cases in the United States, induces me to prepare this brief history of one that partly came under my management. The patient, the Rev. David Cox, aged about 40, of leuco-phlegmatic temperament, was attacked some time in the year 1840, by the disease in question. The tumor formed about midway between the trochanter major and the knee, on the external part of the thigh. In its formation it presented the usual characteristics of fungus hæmatodes, and was developed quite rapidly to the size of a cocoa nut. At this juncture Mr. Cox, acting under the advice of a gentleman of this county, (Stewart) who practices medicine, submitted to an operation. The wound healed kindly, but the tumor re-appeared very soon, at the place from which it was excised, and on the 1st of June, 1844, about six months subsequent to the operation, had attained to about its original size. Up to this time, I am indebted to the family for the details of the case. Dr. Strawn, my co-partner, and myself, were now consulted, and requested to take control of the case. The patient was importunate for a second operation, which we discouraged, and declined performing, for the following reasons: 1st, we regarded the disease as *constitutional*, and not *local*; 2nd, there were few, if any cases recorded, of success by an operation; 3rd, the previous operation had not only failed, but had evidently augmented the rapidity and violence of its formation; 4th, the system gave evidence of *participation*, by the intensely inflamed, and very much enlarged condition of the inguinal glands. Had we have seen the case previous to the condition of our "4th reason," we might have counselled as the only prospect of success—*amputation* of the thigh. Would it have been good practice?

The tumor in the groin (I mean the enlarged gland) continued to

develope very rapidly and fearfully, and on the 1st of August, thereafter, had acquired the dimensions of a half-bushel measure—the original one on the thigh having ceased to grow, remained the size previously indicated. The inguinal tumor now shot out fungus excrescences, (till its surface was dotted all over,) whose mouth resembled an inverted stocking, and over all its surface the meanderings of large veins could be distinctly traced. It now bled frequently and copiously, owing, as I presume, to the perforation of its vessels by an ulcerative action. The bleedings were controlled by *tamponing* these orifices, and by compression. The odour it emitted was extremely offensive, rendering the sick chamber a place of absolute suffering to the attendants and visitors. I should perhaps remark, that in the progress of this tumor, and before its character was so well defined, we were frequently importuned by the patient to puncture it, *he* hoping and believing it to be only an abscess, contrary to our assurances. We refused to operate, but gave our consent to its being done, merely to gratify and convince him. We remarked, however, that it yielded *physical* indications of distinct *fluctuation*. He procured the services of a *Botanical physician* to open it. *Blood* in small quantity was the only result of the *puncture*. After attaining the dimensions and character before described, *sphacelation* ensued, and the entire tumor sloughed out, leaving a cavity or basin that would have contained two or more gallons of fluid, with a subtegumentary hollow or channel, communicating with the original tumor on the thigh. Knowing that Sir Astley Cooper had reported one case of recovery, by the occurrence of the same process, we entertained some hopes that the sloughing would proceed and eradicate the original tumor, and thus save our patient. But contrary to our hopes it did not do so. The patient was now extremely emaciated, aspect *cadaverous*, breathing scarcely perceptible, voice entirely inaudible, with almost constant sleeping. At this stage, after putting him under prescriptions, the case, owing to incidental circumstances, passed to the control of another physician, and was not seen again by us, until about the middle of November, a period of two months. When we again visited the patient, he had recovered his strength, the cavity left by the sloughing of the tumor had filled up kindly, but on the *margin* of the cicatrix, six or eight other tumors, about the size of lemons, had formed. The patient died about the 15th of December, with *rigors*. During the progress of the disease, we frequently interrogated the various organs of the system, to discover,

if possible, whether they had taken on lesions. The most prominent evidences discovered were furnished by the *lungs*, the spinal column and the rectum. These we briefly mention. The *expectoration* was profuse, and resembled thick mucus, having a very unpleasant odour. No blood was discovered with it. *Hemiplegic paralysis* ensued, and there was tenderness upon pressing the *vertebræ*. This we made no effort to relieve, as it occurred only a few days prior to his demise. The *rectum* was the seat of excruciating pain, in voiding the *feces*, or in the escape of *flatus*. This we supposed was owing to an inflammatory action, resulting from the contiguity of the tumor. It would seem useless to give in detail the system of medication adopted in the management of this case. Suffice it to say, that we directed *opiates* in sufficient quantities to lull the suffering; *wine* and *ammonia* to support the patient under the sloughing process; *elixir viûriol* to control the colliquative sweats; *saline aperients* to keep the bowels gently open; and the *pyroligneous acid* locally, to correct the fetor of the exhalations. We should perhaps mention the fact, that the patient was also visited occasionally by Dr. Hay, of this county.

ARTICLE III.

Case of Secondary Syphilis. Read before the Georgia Medical Society, December 14th, 1843—By JOHNSTON B. TUFTS, M. D., of Savannah, Ga.

The patient in this instance was a native of Ireland, aged 32 years; a man in good circumstances, but of very intemperate habits; general health not very good, owing, no doubt, to his liberal use of ardent spirits. This individual had contracted a venereal affection some months before he applied to me for advice. For this primary disease, he had been under the hands of two medical gentlemen of this city, who, according to his account, dismissed him as cured. The primary affection seems to have consisted of a large chancre on the glans penis, and a bubo in the right groin. These two, viz., the chancre and the bubo, he states were evidently cured; but upon making an examination of the seat of the former, I found quite an induration existing there: thus verifying M. Ricord's opinion, that induration

may remain after cicatrization, and being generally a sign of future symptoms, requires peculiar attention. Not very long after his supposed cure, he was attacked with a sore throat, as he imagined, which terminated in a large ulcer in the left side of the fauces, and likewise one on the velum pendulum palati, which were soon succeeded by the following symptoms, at the time (the 3d of November, 1842,) the case fell into my hands: The glands on the right side of the neck, to the number of four or five, were very much enlarged, painful, hard to the touch, and slightly red externally. The iris of the right eye was intensely inflamed; in fact, a pure syphilitic iritis. This also was quite painful, particularly on the application of a strong light. Some contraction of the pupil. The ulcer in the fauces discharged freely; so also did that of the uvula, three-fourths of which latter was destroyed. He also complained of osteo-copic pains generally, but more particularly in the lower extremities. These seemed to annoy him more at night than during the day; although, even then, at times. I had good reason to believe from his statements, that he had never suffered from any thing like a rheumatic affection; no fever or other indisposition than as noted above. From the history of the case, as narrated by the patient, together with the present symptoms, it will be perceived that this was a case of secondary syphilis, resulting from an induration, in accordance with which, I ordered the following treatment:—

R. Proto iodide Merc. ℥i.
 G. Opii. grs. v.
 Ext. Guaiac. ʒi.
 Ft. pill No. 36.

Of these pills, I directed one to be taken every day, two hours after supper. I was thus guarded in using the protoiodide in so small a dose, because I had no great experience in relation to its activity, and was desirous of becoming better acquainted with its strength, before pushing it actively. As a gargle for the throat, I ordered the following:

Corrosive Sublimate, . . . grs. xv.
 Water, lb. 1. (mix.)

With this, the patient was directed to gargle the throat three times a day. He was also advised to bathe the eye in warm milk and water—to use the diet drink, in the proportion of three tumblers full during the day—to abstain from drinking and exposure—and to live upon a vegetable diet; in which latter particulars, he, like most of

devotees of Venus and Bacchus, heeded me but little; inasmuch as he got drunk several times during his illness—exposed himself to all sorts of weather—and fed largely on bacon.

Nov. 4. The same treatment was continued, except that the quantity of the proto-iodide was increased. I directed him to take one pill in the morning and one in the evening. I thus increased the quantity of the proto-iodide much sooner than I expected to do at first, on account of an increased pain in the eye and throat during the night. At this time, the patient was in a very desponding mood—thought that he did not get well fast enough—(rather early I think to complain on this score)—and stated to me, after I had ordered an increased dose of the pills, that he had taken *four* already this morning—on the principle that as they had no taste, they consequently had no strength. I requested him to sin no more in this respect, but to stick to the two per diem until further orders; to which plan, by holding the fear of salivation before his eyes, he adhered.

Nov. 5. Same treatment continued. I would remark here, that I have been touching the ulcers in the throat every morning with nitrate of silver.

Nov. 6. Same treatment continued.

Nov. 7. Same treatment continued, except an alteration of the gargle. The ulcers in the throat having assumed more of an irritable appearance, I ordered the following:

B. Corros. sublim. . . . grs. xv.

G. Opii. ℥i.

Aq. pur. lb. 1. (mix.)

The throat to be gargled with this, as before.

Nov. 8. The same treatment continued.

Nov. 9. Same treatment continued, with this addition: I ordered him to rub in, night and morning, upon the malar process of the right side, a lump of ung. merc. about the size of a nutmeg. Ordered likewise a blister upon the right temple. This particular symptom (iritis) would have been treated actively before could leeches have been obtained, or the patient have been induced to submit to cupping. But the exhibition of the mercurial internally alone, had evidently produced a change for the better, before recourse was had to the topical application. I was also desirous of seeing how soon the internal exhibition of the remedy would act independent of assistance externally.

Nov. 10. Same treatment continued. Blister has drawn well.

A considerable improvement of the eye has taken place in this short time. Directed the blistered surface to be dressed with mercurial ointment. The ulcers in the throat have improved rapidly since using the gargle last ordered. *There is not the least evidence of pytalism.*

Nov. 11. Same treatment continued.

Nov. 12 and 13. Did not see the patient, as he had felt so much better, that he took the liberty of leaving his house, and strolling about the streets, notwithstanding the inclemency of the weather.

Nov. 14. Patient has improved very much. Ulcers doing well, and the eye nearly clear. Says he took the last of his pills to-day. He has therefore taken the 36 pills in twelve days. Continues the use of the ung. merc. to the molar process, and as a dressing to the blistered surface. Directed the following :

R. Proto iodide Merc. . . . 3 ss.
G. Opii. grs. ix.
Ext. Guaiac. 3 ss.
Ft. pill No. 36.

One pill to be taken every evening two hours after supper.

Nov. 15. Patient doing remarkably well. The eye is at this time perfectly free from inflammation. Ulcers in the throat healing rapidly. *No mercurial effect upon the system perceptible*, except the check upon the disease. He has discontinued the use of the ung. merc. as a dressing to the blistered surface, substituting ung. simplex, to which I assented, considering the state of the eye. The other remedies continued as before.

Nov. 16. By reason of other engagements, I did not see the patient to-day. On the 17th and 18th, he was absent from his house, and therefore I did not see him.

Nov. 19. He is now perfectly cured. There is no evidence whatever of the affection remaining. The ulcers in the throat have entirely healed; no tumefaction of the glands of the neck whatever; *no induration* of the former seat of the chancre; and he is entirely free from pain in all parts of his body. During the whole treatment he has not had the least soreness of gums, or any other symptom indicative of the specific action of mercury, other than the cure of the disease.

Remarks.—This cure presents at least one singular feature. The resistance to the specific action of the proto-iodide, which is generally considered as very active in producing pytalism.

Note.—Since the above was reported, I have had a number of similar cases, which have terminated in the same happy manner, and in no single instance have I been under the necessity of producing ptialism. Taking these cases into consideration, I am somewhat inclined to think that the remedy acts more beneficially when this latter is not produced.

Our experience corroborates that of Dr. T. We have not remarked that the proto-iodide of mercury is more apt to salivate than the other preparations of this mineral, but the reverse we believe is true.—EDTS.

ARTICLE IV.

Case of Dry Mortification, occurring immediately after Delivery—amputation of the Leg—recovery. By JOHN G. WESTMORELAND, M. D., of Zebulon, Ga.

Mrs. —, aged about thirty, in the eighth month of utero-gestation, suffered two or three weeks from great irritability of stomach, and during which time, very little nourishment was retained. Premature labor then came on, and she was delivered. Soon after this, she complained of pain and uneasiness in her second toe, with coolness of the foot, which she had felt several hours before delivery.

On examination, I found an unusual coolness of the right foot and leg; but thinking that nothing serious was to be apprehended, prescribed some warm application, and left her. I returned late the next day, and to my surprise found her suffering excruciating pain in her toes and the contiguous part of the foot. The toes were shrivelled, and the whole foot deathly cold. I immediately pronounced it a case of dry mortification, and which it has, unquestionably, proved to be.

The acknowledged proximate cause of this disease being an obliteration of the calibre in the principal arteries of the leg; or from disease, in some other way interfering with the circulation of blood through them, I have thought proper to mention the situation of my patient previous to the attack, that your readers may have the better opportunity of determining the predisposing cause in this case.

Immediately on discovering the lady's true situation, I applied a blister to the foot, and wrapped the part, thickly, with carded wool,

to the extent of several inches above the ankle. In twenty-four hours after these applications, the toes presented a more natural appearance, the temperature of the foot generally, was raised, and the pain diminished: in fact, every thing seemed to flatter us with the hope that the part was reviving. In two days more, however, all the symptoms grew worse—the foot became swollen, and the arterial action, which for the first two or three days was moderate, now assumed a decidedly febrile character. The only position which afforded any relief for the excruciating pain, was with the shoulders elevated, and the foot hanging out of the bed. Warm applications increased the pain, and venesection, to say the best of it, did no good. In this state of extreme suffering, I made an application of cold water by affusion, which in an hour gave almost perfect ease; and from this time she could rest, in the recumbent position, with her foot on the bed, better than in any other way.

This treatment, with nauseating doses of ipecac, allayed the pain and fever, increased the temperature of the foot, and restored a cheerful countenance. But this apparent amendment was of short duration. In two or three days the pain, and other symptoms, indicating rapid progress of the disease, returned. The toes became of a dark color, the cuticle separated, and in a few days more most of the foot was sphacelated. Large and repeated doses of opium, with the cold affusions, were now brought into constant requisition, to moderate the excessive pain, which threatened her dissolution. About the twentieth day the line of demarkation began to form an inch or two above the ankle; and in five or six days, was complete. I amputated about the thirtieth day. The leg was taken off above the knee; and now (ten days since the operation) the stump is healing kindly, with every prospect of speedy recovery.

[Upon the reception of the above communication, we addressed a letter to its author, requesting a few additional particulars, to make the article more complete and satisfactory. We give below the additional facts.

We recently noticed a very similar case in a late *Journal*. with the difference, however, that our contributor and estimable pupil saved his patient, while the one mentioned in the foreign periodical died. The mortification in these cases may have originated either from inanition, the result of the irritable condition of the stomach, or more probably to some pressure upon the vessels or nerves of the pelvic region.—*Edrs.*]

My patient had born two children—she felt the pain in her toe the day preceding the night she was delivered, perhaps six or eight hours previous to delivery. I have no idea that this pain induced labor, for it was inconsiderable at the time; but I think labor was brought on by excessive vomiting. Her temperament is more bilious than otherwise—there is no hereditary disposition to mortification. I judged of the temperature by my own feelings in touching. She used no particular article of diet, before nor after the attack. I never could feel the pulsation of any artery lower down than the femoral. About a week elapsed from the commencement of the pain, to the separation of the cuticle. The arteries divided in amputating had their caliber almost entirely destroyed; so much so that not a drop of blood escaped from them, consequently no ligatures were required. The arteries had the appearance of white cords, with capillary orifices the size of the point of a pin.

There is no disease in any other artery of the body that I can detect. The stump now (twenty-seventh day since the amputation) has nearly healed, and the patient is doing very well.

PART II.—REVIEWS AND EXTRACTS.

On the Buffy Coat of the Blood. By GEORGE GULLIVER, F. R. S., Surgeon in the Royal Regiment of Horse Guards.—Read at the Royal Medical and Chirurgical Society, February 11, 1845. (*From the Edinburgh Med. and Surg. Journal.*)

I. *Historical notices of the consistency of the Blood, and of the condition of the red corpuscles in inflammation.*—Boerhaave* and his commentator Van Swieten maintained that a lentor or vicidity of the blood is connected with inflammatory disease. Langrish† describes the blood in acute fevers as being more than usually viscid and tenacious, and as containing an excess of red corpuscles. He held the incorrect opinion, common to many eminent men, either his cotemporaries or immediate predecessors, as Boerhaave,‡ Keill,§ Jurin.||

* Aphor. 103, 110, 117, 375, 663.

† Practice of Physic, pp. 22 and 74, 8vo. Lond. 1735.

‡ Prælectiones Academicæ, ed. Alb. Haller, §ccxxvii. t. ii. 8vo. Gottingæ, 1743.

§ Essays on several parts of the Animal Economy, p. 95, et seq. 2d ed. 8vo. Lond. 1717.

|| Phil. Trans. 1719, vol. 30, p. 1000.

and Haller,* that coagulation is caused merely by a running together of the red corpuscles. Triller,† Schwenke,‡ Dr. Francis Home,§ Huxam,|| and Marherr,¶ concluded that the viscosity of the blood is increased during inflammation; and this state of the blood was made the subject of several dissertations about the middle of the last century, as by Klein,** Goesling,†† Pohlius,‡‡ and Nicolai. §§

On the contrary, Buechner,||| wrote a treatise on the thinned state of the blood. Quesnay,¶¶ believed that the floating of the humour which forms the buffy coat, and which he states is of the same nature as the lymph, so far from indicating a thickening, really shows that the fluidity of the blood is increased.

Quesnay also states, in anticipation of a very recent doctrine, that the buffy part is formed from the red corpuscles, destroyed and reduced into a glaire by the action of the arteries, and that this glaire abounds in acute diseases at the expense of the corpuscles, sometimes to such an extent that the red part is much diminished. Bordenave*** held somewhat similar views.

Dr. Richard Davies,††† observing the quickened sinking of the red corpuscles in blood becoming buffy, inferred that there was a preternatural attenuation of the coagulable lymph. He called this spontaneously coagulable matter, after Borelli,†††† the gluten. We owe to Dr. Davies the earliest correct description, printed in our language, of this principle of the blood; which I mention with the hope of drawing him from the oblivion to which he has been so long and so unjustly consigned, and to notice the strange silence of the Hunters and their encomiasts about his researches.

It is now well known that the buffy coat is formed of fibrin left at the surface of the clot by the sinking of the red corpuscles. Like Davies, Mr. Hewson§§§ and Dr. Davy|||| attributed this sinking chiefly to an increased tenuity of the coagulable lymph, an inference which the two last distinguished physiologists drew from the fact discovered by Hewson, that the corpuscles fall more rapidly in the entire mass of the blood, during the formation of the buffy coat, than they will do in the serum alone. Similar views were adopted by

* Deux Memoires sur le Mouvement du Sang, p. 21-22, 8vo. Lausanne, 1756.

† Com. de Pleuritis, §§ xxviii. and xlvii. 8vo. Francof. et Moenum, 1740.

‡ Hamatologia, p. 154, et seq. 8vo. Hagæ Com. 1843.

§ Principia Medicinæ, p. 101. 8vo. Edin. 1758.

|| Essay on Fevers, chap. 4. p. 36. 8vo. Lond. 1769.

¶ Prælectiones in H. Boerhaave, Inst. Med. t. 2, p. 254. Vien et Lips. 1772.

** De Massæ Sang. Viscidine. 4to. Argentorati, 1737.

†† Diss. Inaug. de Spissitudine Sanguinis. 4to. Göttingæ, 1747.

‡‡ De Spissitudine Sanguinis a neglecto motu. 4to. Lips. 1749.

§§ De Spissitudine Sanguinis. 4to. Halle, 1749.

||| De nimia Sang. Fluidit. 4to. Halle, 1749.

¶¶ Traité de la Saignée, pp. 405, 406, 415, 416. 8vo. Paris, 1760.

*** Essai sur la Physiologie, p. 155-156. 8vo. 4ed. Paris, 1787.

††† Essays on the Human Blood, p. 23. 8vo. Bath, 1760.

§§ De Motu Animalium, Op. posth. pars. ult. Prop. cxxiii. 4to. Romæ, 1681.

|||| Exp. Inq. Part 1, p. 45, et seq. 8vo. Lond. 3. ed. 1780.

||||| Researches, Phys. and Anat. vol. ii. p. 48. 8vo. Lond. 1829.

Thomas Houlston,* Dr. George Fordyce,† Dr. William Hunter,‡ Dr. James Makittrick,§ Dr. George Levison,|| Dr. James Gregory,¶ Dr. Cullen,** Hugh Moises,†† James Wilson,‡‡ and others. But Mr. Hey§§ maintained that the blood is not thinned during inflammation; Mr. Grainger||| is of the same opinion, and Professor Henle and Mr. Wharton Jones¶¶ state that the coagulable lymph is really thickened.

The last two authors and Professor Wagner ascribe the formation of the buffy coat to an increased disposition of the red corpuscles to run together, as originally explained by Professor Hermann Nasse*** of Marbourg, and thus described by Mr. Jones: "The minute process leading to the separation of the *liquor sanguinis* from the red corpuscles, the visible condition for the formation of the buffy coat, consists in an exaltation both of the rapidity and closeness with which the red corpuscles aggregate into rolls, and these again into a sponge-work, thus squeezing out the *liquor sanguinis* from among the corpuscles, and allowing the greater specific gravity of the latter to come more fully into play, whereby the *liquor sanguinis*, which in such cases is in relatively greater quantity, collects at the top, and, coagulating, gives rise to the buffy coat."

Dr. Davy††† observed, that, in certain cases in which the inflammatory state is best marked, the separation of the corpuscles and coagulable lymph is most rapid. Dr. Stoker‡‡‡ has also shown that the buffy coat may occur in blood which coagulates more quickly than usual. In a thin film of such blood, Schroeder Van der Kolk, and Dr. Alison,§§§ observed that the corpuscles separate laterally, giving it a mottled appearance, as characteristic of the state of the blood as the buffy coat itself; a fact which seems to have been described by Mr. Hunter, as follows, in his Surgical Lectures, when speaking of the blood in inflammation: "The blood has an increased disposition to separate into its component parts, the red globules become less uniformly diffused, and their attraction to one another

* Diss. Med. Inaug. de Inflammatione, p. 14, 4to. Lugd. Bat. 1767.

† Elements of the Practice of Physic, Part 2, p. 28-30. 8vo. Lond. 1768.

‡ Lectures, p. 8-9, 4to, MS. press mark D.D. f. 6, in Lib. Roy. Med. Ch. Soc. No date, but some of Hewson's experiments are noticed.

§ Com. on the Princ. and Practice of Physic, p. 154. 8vo. Lond. 1772.

|| An Essay on the Blood, p. 86. 8vo. Lond. 1776.

¶ Conspectus Med. Theor. t. 1, §§ 503 and 504. 8vo. ed. alt. Edin. 1782.

** First Lines of the Practice of Physic, vol. i. § ccxli. 8vo. Edin. 1789.

†† Treatise on the Blood, p. 48. 8vo. Lond. 1794.

‡‡ Lectures on the Blood, p. 53. 8vo. Lond. 1819.

§§ Observations on the Blood, p. 14. 8vo. Lond. 1779.

||| Elements of Gen. Anat. p. 41. 8vo. Lond. 1829.

¶¶ Report, §§ 1, 2, 40, 45, 49, in No. 34 of Brit. and For. Med. Rev., and §§ 9, 107 in No. 35 of same Review.

*** Henle, Anat. Gener. tr. par Jourdan, p. 463. 8vo. Paris, 1843; and Mr. Jones's Obs. on the Blood, pp. 12-17, reprinted from No. 28 of Brit. and For. Med. Rev.

††† Phil. Trans. 1822, p. 271.

‡‡ Pathological Observations, pp. 37 and 41. 8vo. Dublin, 1823.

§§ Outlines of Phys. and Path. p. 47. 8vo. Edin. 1833.

becomes stronger, so that the blood when out of the vessels soon becomes cloudy or muddy and dusky in its colour, and, when spread over any surface, it appears mottled, the red blood attracting itself and forming spots of red. This is so evident in many cases that it is hardly necessary to wait till the whole coagulates to form a judgment of it.* Dr. Charles J. B. Williams† thinks that the aggregation of the corpuscles may be a mechanical one, induced by a change in the relative dilution of the *liquor sanguinis*, or serum, within and without the blood corpuscle.

Since the publication of the accurate description by Dr. Hodgkin and Mr. Lister,‡ the running together of the red corpuscles of the healthy blood of mammalia into piles has become well known § The effect of mucilage or white of egg in promoting their further aggregation was observed by Mr. Wharton Jones|| and Professor Henle; and I have been informed by Mr. Jones that there are some observations on the subject by Nasse.¶ The effect of neutral salts in separating the corpuscles from each other was noticed by Eiler,** and since by Dr. Davy†† and others.

II. *Separation of the red corpuscles and liquor sanguinis in the blood of the horse.*—When the venous blood of this animal is received into a small narrow vase, an upper buffy part regularly forms, quite equal in perpendicular measurement to the lower red part of the clot. This spontaneous separation was probably known to Harvey‡‡; it is mentioned by Dr. Allen Thomson.§§ and more particularly by Andral|| Gavarret, and Delafond. My observations, unless otherwise expressed, were made on the blood of the horse.

III. *Sinking of the corpuscles in the liquor sanguinis and in the serum.*—It is certain that the corpuscles sink at least twice faster in the entire mass of the blood, during the formation of the buffy coat, than they will do in the serum alone, as is shown in the details of experiments 4–10.

IV. *Spontaneous acceleration of the rate of sinking of the corpuscles in the liquor sanguinis and in the serum.*—During the formation of the buffy coat, it is very remarkable that the corpuscles fall much faster after the first two or three minutes than before. In a mixture of serum and corpuscles, either fresh or after it has been kept some hours and occasionally agitated, there is also an acceleration, though to a less degree, in the rate with which the corpuscles subside.

* Hunter's Works by Palmer, vol. i. p. 235. 8vo. Lond. 1835.

† Principles of Medicine, p. 89. 8vo. Lond. 1843.

‡ Philosophical Magazine, vol. iii. p. 135. July–December, 1827.

§ Dr. Davy has lately described the visco-cohesive quality of the corpuscles. See Trans. Roy. Soc. Edin. 1855, vol. xvi. p. 74–75.

|| Repert. § 22 and 31. Edinb. Med. Rev. No. 74.

¶ D's Blut, pp. 223, 225, and 231. 8vo. Bonn, 1835.

** Hist. de l'Académie des Sciences, année 1751, pp. 13, 14.

†† Res. Phys. et Anat. vol. ii. p. 178. 8vo. Lond. 1839.

‡‡ De Generatione Animalium, p. 160. 4to. Lond. 1651.

§§ Syllabus of Lectures on Physiology, p. 13. 8vo. Edin. 1835.

|| Hematologie Pathologique, pp. 28 and 50. 8vo. Paris, 1843.

It is commonly greatest in the *liquor sanguinis* between the third and sixth minutes, and sometimes later; and later still in the serum.

V. *The falling of the corpuscles rather retarded than hastened by a thinning of the liquor sanguinis*—If the rapid falling of the corpuscles, during the formation of the buffy coat, be due to an attenuation of the *liquor sanguinis*, it follows, that, if we increase this quality without hastening coagulation or making the corpuscles lighter in relation to the containing fluid, they will sink still more quickly, and be suspended again when the mixed fluid is made thicker. I accordingly mixed dilute saline solutions and urine with the blood, by all of which its consistency and specific gravity were reduced, and its coagulation somewhat retarded. Yet in none of these mixtures was the falling of the corpuscles so rapid, nor the buffy coat so thick, as in some pure blood set apart for comparison; while in one mixture of urine and blood, which remained liquid for upwards of fifteen minutes, the corpuscles never sank enough to leave the slightest buffy surface.

It was remarkable, too, that when there was a falling of the corpuscles in these mixtures, the acceleration above noticed in the rate of sinking after a few minutes was prevented.

When the same quantity of salt was dissolved in mucilage and mixed with the blood, the corpuscles, so far from being suspended, always fell more rapidly than in blood thinned by saline matter in water, sometimes as quickly as in pure blood, occasionally quicker; and now and then with such velocity, that a clear floating portion of *liquor sanguinis*, two inches deep, appeared in five minutes.

In this case, the acceleration in the rate with which the corpuscles sunk, after the first two or three minutes, was still greater than in pure blood.

Some trials were next made on the falling of the corpuscles in serum made thinner and lighter by the weak saline solutions, and in serum made thicker and heavier by mucilage; whence it resulted, calculating from the time required for the appearance of a clear stratum of fluid at the top of the mixtures, that the corpuscles subsided more rapidly in the thicker than in the thinner fluid.

That the *liquor sanguinis* becomes viscid in changing from the liquid to the solid state, as originally described by Dr. Davy,* is a fact easily shown. But, on the other hand, it has never been supposed that it becomes thinner before it coagulates, after its abstraction from the animal. Yet to this improbable conclusion we shall be led, if we admit that the sinking of the corpuscles in the *liquor sanguinis* is a correct measure of its consistency or tenuity.

VI *State of the red corpuscles in buffy blood*.—As it is certain, *cæteris paribus*, that the falling of particles through a light and thin fluid must be quicker than through a heavier and thicker one, the state of the corpuscles in these different fluids cannot be equal.

And that such is really the case, may easily be seen with the naked

* Phil. Trans., 1822, p. 273.

eye. Thus, in thin layers of those viscid mixtures in which the corpuscles sunk most rapidly, they were so clustered as to appear like particles of coarse and dark red powder in an excess of limpid fluid; while the thinner mixtures, in which the corpuscles fell most slowly, were of an uniform and lighter red colour, from the separation and equable diffusion of the corpuscles throughout the fluid. With the aid of the microscope the corpuscles of human blood, which had no buffy coat, were seen frequently in piles; but these were only occasionally grouped into clusters, and by far the greater number of the corpuscles were either separate or very loosely connected together. In buffy human blood the corpuscles are more aggregated. But it is in the naturally buffy clot of the horse's blood that the aggregation of the corpuscles is most remarkable; they appear as if melted together, and are almost universally collected into clusters, the piles sticking to each other. These observations were made at various times after coagulation.

VII. *Agents which prevent and increase the aggregation of the corpuscles.*—When a saline solution was mixed with the clustered corpuscles, their connection was quickly dissolved, so that they were all separated and equably diffused throughout the liquid. Either urine or syrup had the same effect. On adding mucilage, the corpuscles again became aggregated, and they were again dispersed by another dose of saline matter. A small proportion of salt mixed with the mucilage promotes the clustering of the corpuscles more than the mucilage alone, as is shown in experiments 22–25. The salt alone had the effect of more or less reducing the size of the corpuscles, as if it dissolved a part of their surface. The serum of one animal often causes the corpuscles of another animal to become aggregated very quickly.

VIII. *A probable cause of the efficacy of saline medicines in inflammations.*—As only a very weak saline solution is required to prevent or destroy the aggregation of the corpuscles, and to correct the tendency in the blood to the formation of the buffy coat, may not this action of the salt be one cause of the well-known utility of saline medicines in inflammatory diseases?

IX. *Cause of the rapid sinking of the corpuscles, and of its accelerated rate during the formation of the buffy coat.*—The aggregation of the corpuscles was connected with their most rapid sinking, and their separation and diffusion with their most tardy sinking; while their rate of falling was hastened by a thickening and retarded by a thinning of the *liquor sanguinis*. The largest particles of a powdered substance will sink quicker in a fluid than the smallest particles. In some experiments with magnesia in a solution of Epsom salt, and with poppy seed in mucilage, there was no evident acceleration in the rate of sinking, similar to that of the red corpuscles through the *liquor sanguinis*. I know not that this acceleration can be explained otherwise than by the increasing aggregation of the corpuscles during their descent. Yet there was a like accelera-

tion, though to a less degree, in the falling of the corpuscles through the serum, in which they were clustered from the beginning of the experiment, or even many hours before. But the masses may coalesce still further during their descent; and it will be recollected that the accelerated sinking is quite prevented, or even reversed, when the corpuscles are kept apart by weak saline solutions.

X. *Details of Experiments.*—For the sake of precision, which appears the more necessary since Mr. Prater* has shown the opposite effects on the blood of different quantities of the same substance, I shall detail some of the principal experiments made in the course of the present inquiry. They will be found to illustrate many points foreign to the subject now considered, such as the effects of various substances on coagulation and on the contraction of the clot. The experiments were all conducted under the following circumstances, unless otherwise mentioned; and my best thanks are due to Mr. Siddall, the able veterinarian of the Blues, for his kind assistance. The blood used was drawn from the jugular veins of troop horses; and, in comparative trials, in order that every portion of it should be as nearly as possible alike, the blood was received from the animal into a pitcher, stirred for a few seconds with a stick, and then quickly poured into the different vases for observation. These were common circular glass bottles, with the tops cut off, and holding about six ounces when filled within about half an inch of the rim; thus filled, the column of fluid measured about four inches in length, and one and three-fourths in diameter. The agitation used to mix the different matters with the blood was also applied to the pure blood set apart for comparison. As the corpuscles in pure blood are soaked in the *liquor sanguinis*, they were well mingled with the artificial fluids. If dropped on or only just dipped in a dense saline solution, they may remain awhile at the top, just as a piece of fibrin will do, though it sinks at last, in a saturated solution either of Glauber salt, of nitre, or of muriate of soda. This is an important fact in relation to the use of such solutions in estimating the specific gravity of fibrin, as was done by that excellent observer, Dr. Benjamin Babington.* His estimate was probably too high, as the saline solution deprives the fibrin of some of its natural moisture. In a weak saline solution, the corpuscles will fall rapidly before they become disjoined and saturated, though very slowly afterwards. If they become specifically heavier or lighter by endosmosis or exosmosis, it may be supposed that their specific gravity would only be approximated, within certain limits, to that of the fluid in which they are placed; and that they would differ no more from the fluid in that respect than they did originally from the *liquor sanguinis*. When the corpuscles are stated to have sunk to any extent, it is merely meant to express that a clear

* *Experimental Inquiries in Chemical Physiology*, Part 1, p. 37, 8vo. Lond., 1832. He observes that adding serum to blood hastens its coagulation. *Op. cit.* p. 195.

* *Cyclop. of Anatomy*, vol. 1. p. 418.

supernatant stratum of fluid was left, corresponding to the given measure; and when it is noted that there was no sinking of the corpuscles, it is simply to affirm that enough of them remained at the top to preserve its opaque red colour.

XI. *Sinking of the corpuscles in blood received from the animal, and not agitated afterwards.*

I. In $3\frac{1}{2}$ minutes the corpuscles sunk $\frac{1}{2}$ inch.

$5\frac{1}{2}$	.	.	.	1
$7\frac{1}{2}$	.	.	.	$1\frac{1}{2}$
$8\frac{1}{2}$	.	.	.	2 inches.
$9\frac{1}{2}$	.	.	.	$2\frac{1}{2}$.

XII. *Sinking of the corpuscles in the same blood, broken up in the serum twenty-four hours afterwards, and strained through linen.*

II. In 6 minutes the corpuscles sunk $\frac{1}{2}$ inch.

8	.	.	.	$\frac{1}{2}$
11	.	.	.	$\frac{1}{2}$
16	.	.	.	1
26	.	.	.	$1\frac{1}{2}$
34	.	.	.	2 inches.

3. In some blood from another horse, treated in the same way after keeping seven hours, the corpuscles fell, in eleven minutes, one inch, and in twenty-three minutes, two inches.

XIII. *Comparative sinking of the corpuscles in the liquor sanguinis and in serum.*

4. Blood divided into three portions. In the *liquor sanguinis* the corpuscles sunk,

In $2\frac{1}{2}$ minutes,	.	.	.	$\frac{1}{8}$ inch.
$3\frac{1}{2}$	.	.	.	$\frac{1}{4}$
$4\frac{1}{2}$	.	.	.	$\frac{3}{8}$
5	.	.	.	$\frac{1}{2}$
6	.	.	.	$\frac{3}{4}$
7	.	.	.	1.

5. In a second portion, deprived of fibrin by whipping, the corpuscles sunk,

In 5 minutes,	.	.	.	$\frac{1}{8}$ inch.
7	.	.	.	$\frac{1}{4}$
9	.	.	.	$\frac{3}{8}$
10	.	.	.	$\frac{1}{2}$
13	.	.	.	$\frac{3}{4}$
15	.	.	.	1.

6. In the third portion, deprived of fibrin by agitation with nails in a bottle, excluding air as much as possible, the corpuscles fell at the same rate. The specific gravity of the serum at 60° was 1029; and it coagulated at a heat of 158° .

7. In the *liquor sanguinis* of another horse the corpuscles subsided.

In $2\frac{1}{2}$ minutes,	.	.	.	$\frac{1}{8}$ inch.
$3\frac{1}{2}$	.	.	.	$\frac{1}{4}$
$4\frac{1}{2}$	.	.	.	$\frac{3}{8}$

In 4½	.	.	.	½ inch.
5	.	.	.	$\frac{3}{4}$
6	.	.	.	$\frac{7}{8}$
8	.	.	.	1 $\frac{1}{4}$
9	.	.	.	1 $\frac{3}{4}$
10½	.	.	.	2 inches.

At the end of fourteen minutes there was a film on the top; beneath quite liquid; coagulated in sixteen minutes. Final perpendicular measurement of the upper buffy part two and a-half, and of the lower red part, one and three-fourth inches.

8. In a second portion, immediately after removing the fibrin in a bottle, excluding air, the corpuscles subsided,

In 8 minutes,	.	.	.	$\frac{1}{8}$ inch.
11	.	.	.	$\frac{1}{4}$
12½	.	.	.	$\frac{3}{8}$
13	.	.	.	$\frac{1}{2}$
14	.	.	.	$\frac{5}{8}$
15½	.	.	.	$\frac{3}{4}$
17½	.	.	.	1
20	.	.	.	1 $\frac{3}{8}$
21	.	.	.	1 $\frac{1}{4}$
24	.	.	.	1 $\frac{3}{4}$
27	.	.	.	2 inches.

9. After the lapse of twenty-four hours the superstratum of serum, in Exp. 8, measured two and seven-eighth inches, and the substratum of corpuscles one and three-fourth. The mixture was then shaken, when the corpuscles sunk as follows:

In 11 minutes,	.	.	.	$\frac{1}{8}$ inch.
14	.	.	.	$\frac{1}{4}$
15½	.	.	.	$\frac{3}{8}$
16½	.	.	.	$\frac{1}{2}$
17½	.	.	.	$\frac{5}{8}$
19	.	.	.	$\frac{3}{4}$
20	.	.	.	$\frac{7}{8}$
21	.	.	.	1
22½	.	.	.	1 $\frac{1}{8}$
23½	.	.	.	1 $\frac{1}{4}$
25	.	.	.	1 $\frac{3}{8}$
27	.	.	.	1 $\frac{1}{2}$
31	.	.	.	1 $\frac{3}{4}$
36	.	.	.	2 inches.

10. In the same mixture, after agitation the next day, the corpuscles fell at the same rate. They subsided most slowly in the newest serum in Exp. 35 and 36.

XIV. *Sinking of the corpuscles of one animal in the serum of another.*

11. Corpuscles of human blood which took 13 minutes to sink $\frac{1}{4}$ th of an inch in their own serum, sp. gr. 1028, sunk in horse's serum,

of the same sp. gr., above twice as rapidly, and with a remarkable acceleration after they began to sink. The aggregation of the corpuscles was very plain to the naked eye quickly after they were put into the horse's serum. See Exp. 37 and 41.

12. Corpuscles from horse's blood sunk quicker in human serum, sp. gr. 1032, than in their own serum, sp. gr. 1028.

XV. *Slow sinking of the corpuscles in weak saline solutions.*

13. $\frac{3}{4}$ ss. of mixed serum and corpuscles agitated with $\frac{3}{4}$ iv. of solution of nitre, 10 grains to an ounce of water, sp. gr. 1020. The corpuscles took an hour to sink an inch.

14. A similar trial, substituting urine, sp. gr. 1024, for the solution of nitre. The corpuscles fell equally slow.

15. In the serum, sp. gr. 1028, for comparison with Exp. 13-15, the corpuscles sank half an inch in 15 minutes.

XVI. *Formation of the buffy coat prevented or lessened by making the blood thinner and lighter, and its coagulation retarded.—Sinking of the corpuscles slower after a few minutes, contrary to their rate of falling in pure blood.—*N. B. Sp. gr. of the weakest saline solution 1011, five grains of common salt to an ounce of water; the weak saline solution, sp. gr. 1020, 10 grains to the ounce. Urine, sp. gr. 1023.

16. Equal parts of urine and blood. Liquid at the end of fifteen minutes; began to coagulate around the margin in seventeen minutes; a soft jelly in twenty-two minutes. There was no buffy coat. See Exp. 19.

17. Pure blood, for comparison with Exp. 16. The corpuscles fell an inch in seven minutes, and it coagulated in twelve minutes.

18. Blood for this and the next three experiments from another horse. A portion of the unmixed blood coagulated in ten minutes, and the corpuscles sunk very nearly as noticed in Exp. 4.

19. Equal parts of urine and blood. In four minutes the corpuscles sunk one-fourth of an inch; and ultimately no more than three-eighths of an inch. Coagulation did not begin until after sixteen minutes. Differs from the like Exp. 16, in which there was no sinking of the corpuscles.

20. Equal parts of weakest saline solution and blood. In four minutes the corpuscles sunk one-eighth of an inch; in eight and a-half minutes one-fourth of an inch; and never more than three-fourths of an inch. Mixture liquid at the end of twenty-two minutes; viscid in twenty-five; jellied in twenty-eight.

21. Equal parts of weak saline solution and blood. In four minutes the corpuscles sunk one-eighth of an inch; and finally, no more than three-eighths. Coagulation two minutes sooner than with the weakest saline solution, Exp. 20.

XVII. *Sinking of the corpuscles accelerated by addition of soda and salt to the blood.*

22. $\frac{3}{4}$ ss. of mucilage, sp. gr. 1030, saturated solution of muriate of soda, $\frac{3}{4}$ iii. of blood. Sinking much more rapid, and the rate much accelerated.

In 3 minutes,	.	.	$\frac{3}{4}$ inch.
3 $\frac{1}{2}$	.	.	1.
5	.	.	2 inches.
7	.	.	2 $\frac{1}{4}$.
9	.	.	2 $\frac{3}{4}$.

Coagulated in eighteen minutes; buffy part throughout firm and contracted next day.

23. $\frac{3}{10}$ ss. of the same mucilage, ten grains of muriate of soda, and $\frac{3}{4}$ iii. of blood. The corpuscles sunk.

In 3 minutes,	.	.	$\frac{3}{4}$ inch.
4	.	.	1
5	.	.	1 $\frac{1}{4}$
9	.	.	1 $\frac{3}{4}$.

Coagulated in thirteen and a-half minutes. Buffy part firm and contracted next day. Aggregation of the corpuscles, as in Exp. 22, quite plain to the naked eye.

24. $\frac{3}{10}$ i. mucilage, sp. gr. 1085, and $\frac{3}{4}$ iv. of blood. The corpuscles sunk,

In 4 minutes,	.	.	$\frac{1}{8}$ inch.
7	.	.	$\frac{1}{4}$.
9	.	.	$\frac{1}{2}$.
10	.	.	$\frac{3}{8}$.
13	.	.	1 $\frac{1}{4}$.

Not coagulated in less than twenty minutes. Contraction of clot very slight next day. The corpuscles sank rather slower than in pure *liquor sanguinis*, but much faster than in blood, mixed with dilute saline solution without mucilage.

25. $\frac{3}{10}$ i. of the same mucilage, ten grains of muriate of soda, and $\frac{3}{4}$ iv. of blood. The corpuscles sunk,

In 6 minutes,	.	.	$\frac{3}{4}$ inch.
8	.	.	$\frac{3}{8}$
10	.	.	1 $\frac{1}{8}$
13	.	.	1 $\frac{1}{4}$.

Coagulated two or three minutes quicker, and the clot contracted rather more than in Exp. 24.

26. $\frac{3}{10}$ ss. weakest saline solution, and $\frac{3}{4}$ iii. of blood. In three minutes the corpuscles sunk one-eighth of an inch; in five minutes one-fourth; in ten minutes one-half. A film on the top in twelve minutes; coagulated in fourteen.

27. $\frac{3}{10}$ ss. weak saline solution, and $\frac{3}{4}$ iii. of blood. In three and a half minutes the corpuscles sunk one-eighth of an inch; in six minutes one-fourth; and finally, only three-eighths of an inch. Viscid in ten minutes: a trembling clot in twelve.

28. A portion of blood used in the experiments from 22 inclusive, coagulated in ten minutes, and had an upper buffy part equal in perpendicular measurement to the lower red part.

In all the trials of urine and the saline solutions with blood, the contraction of the clot was either much diminished, or prevented;

though not so when mucilage was added with the salt. Coagulation was most retarded by the weakest saline solution.

XVIII. *Sinking of the Corpuscles more rapid in serum made thicker and heavier, than in serum made thinner and lighter. The accelerated rate of sinking promoted by the thicker and preceated or diminished by the thinner fluid.*—N. B. Saline solution. sp. gr. 1020, 10 grains of muriate of soda to an ounce of water. Urine sp. gr. 1026. Mucilage. sp. gr. 1085. ziv . of gum arabic to a pint of water. Blood in Exp. 29–35 drawn twenty four hours; fibrin separated from it in a bottle excluding air; sp. gr. of serum 1028.

29. Equal parts of saline solution and blood without fibrin. In forty minutes the corpuscles fell one-twelfth of an inch, in 150 minutes three-eighths of an inch.

30. The same, adding zi . of mucilage. Sinking of the corpuscles rapid, but the separation of them from the fluid at first imperfect. It was clearer in one minute half an inch from the top. In six minutes the corpuscles had fallen through the column of the fluid, the line of separation between it and the corpuscles being distinct one inch from the bottom. After shaking the mixture next day, they subsided in two minutes one-fourth of an inch, and then with the same velocity as the day before.

31. Equal parts of urine and blood without fibrin. In forty minutes the corpuscles fell one twelfth of an inch; in 150 one-fourth of an inch.

32. The same, adding one ounce of mucilage. In fourteen minutes the corpuscles sunk one-fourth of an inch; in seventeen minutes half an inch; in twenty-three minutes one inch; in thirty-one minutes one and a-half inch; in forty-eight minutes one and seven-eighths of an inch.

33. zi . of saline solution and ziii . of blood without fibrin. In eleven minutes the corpuscles sunk one-eighth of an inch; in fifteen minutes one fourth of an inch.

34. zi . of mucilage and ziii . of blood without fibrin. Sinking of the corpuscles quick, but the line between them and the supernatant fluid at first indistinct. In six minutes they subsided about one eighth of an inch; in eleven minutes three-fourths of an inch; in fifteen minutes one and a half inch, with a distinct line between the corpuscles and the fluid.

35. Blood without fibrin for comparison with Exp. 29–35. The corpuscles sunk in six minutes one fourth of an inch; in eleven and half minutes half an inch; in fifteen minutes one and a half inch.

36. The same, only an hour after it was drawn. The corpuscles fell in twelve minutes a quarter of an inch; in fifteen minutes half an inch; in thirty minutes one and a half inch. Thus the sinking was the slowest in the newest serum, contrary to Exp. 8, 9, and 10.

37. Blood without a buffy coat, taken twenty-four hours before from the basilic vein of a man, aged forty, afflicted with pulmonary catarrh. Clot broken up in the serum and strained through tow.

The mixture thicker and darker than horse's blood, apparently from a greater proportion of corpuscles. They took sixty minutes to sink one-eighth of an inch. See Exp. 11 and 41. The three next experiments with parts of the same blood.

38. xi . of mucilage mixed with xi of the strained blood. The corpuscles sank in thirty-two minutes one-eighth of an inch; in forty minutes one-fourth.

39. xi . of saline solution and xi of the strained blood. In forty minutes the corpuscles subsided one-tenth of an inch.

40. Sp. gr. of the serum 1027. It coagulated at a heat of 159.

41. Blood with a thick buffy coat from a young man with pulmonary catarrh. Strained as in Exp. 37. Thicker and darker, apparently from a greater proportion of corpuscles than horse's blood. They sunk in thirty-nine minutes one-tenth of an inch; in fifty-six minutes one-eighth of an inch. See Exp. 11 and 37.

XIX. *Effects of syrup made of equal parts of white sugar and water.*

42. xi syrup and xi of blood. No sinking of the corpuscles. A weak jelly in twelve and a half minutes. No contraction of clot or exudation of serum.

43. xi syrup, ten grains of muriate of soda, and xi of blood. Same as the foregoing, except that coagulation was two minutes later.

44. Blood for comparison with Exp. 42 and 43. Coagulated in eleven minutes, with the usual deep buffy coat.

XX. *Effects of increasing the proportion of serum and of water in the blood.*

45. xi serum added to xi of blood. The corpuscles sunk in two and a half minutes one-eighth of an inch; in three minutes one-fourth, and never subsided further. Coagulation took place in eight minutes.

46. xi of serum to xi of blood. The corpuscles fell in 3 minutes $\frac{1}{4}$ of an inch; in 5 minutes $\frac{1}{2}$ an inch, and sunk no further. Coagulation in 7 minutes.

47. Same blood, for comparison with Experiment 45 and 46, coagulated in 10 minutes, and the corpuscles sunk as deep as usual.

48. xi of serum and xi of blood from another horse. The corpuscles sunk only $\frac{1}{4}$ ths of an inch. Coagulation took place in 4 minutes.

49. xi of serum and xi of blood. Coagulation and sinking of the corpuscles the same as in the foregoing.

50. Blood, for comparison with Experiment 48 and 49, coagulated freely in 6 minutes, when the corpuscles had fallen one inch.

51. xi of serum and xi of blood from another horse. Corpuscles sunk $\frac{1}{4}$ th of an inch. Coagulated in $3\frac{1}{2}$ minutes. Clot much contracted next day.

52. xi distilled water and xi blood. No sinking of the corpuscles. Coagulated in 6 minutes. Clot contracted next day, but less so than the preceding.

53. Blood, for comparison with Exp. 51 and 52. Coagulated in three and a-half minutes. No buffy coat.

54. $\frac{3}{4}$ of serum and $\frac{3}{4}$ of blood from another horse. Corpuscles sunk in four minutes three-eighths of an inch; in five minutes two-thirds of an inch; in six minutes one inch; in seven minutes one inch and a quarter, and never further. Coagulated in eight minutes.

55. $\frac{3}{4}$ distilled water and $\frac{3}{4}$ blood. Corpuscles sunk in seven minutes one-eighth of an inch, and finally no more than one-third of an inch. Began to coagulate in thirteen minutes, and a feeble jelly in fifteen.

56. Blood, for comparison with Exp. 54 and 55. Corpuscles sunk in four minutes one-eighth of an inch; in five minutes one-fourth of an inch; and finally one inch and three-fourths. Coagulation the same as in Exp. 55.

XXI. *Effects of increasing the proportion of the corpuscles.*

57. $\frac{3}{4}$ of corpuscles and serum, obtained by straining the broken-up clot and serum through linen, mixed with $\frac{3}{4}$ of blood, part of that used in Exp. 48, 49 and 50. No sinking of the corpuscles. Coagulated rather firmly in three minutes.

58. The same, with an additional ounce of strained crur, gave the same result, except that coagulation was half a minute later.

59. $\frac{3}{4}$ of whipped blood and $\frac{3}{4}$ blood from another animal. No sinking of the corpuscles. Coagulated firmly in seven minutes.

60. The same with double the quantity of whipped blood, gave the same result.

61. $\frac{3}{4}$ of whipped blood and $\frac{3}{4}$ of blood. The corpuscles subsided in three and a-half minutes one-eighth of an inch; in four and a-half minutes one-fourth of an inch; in six minutes three-eighths of an inch; and, finally, no farther. Coagulated in less than eight minutes. In this experiment the corpuscles sank more quickly, when added to blood just drawn, than they would do in the serum alone.

62. $\frac{3}{4}$ of corpuscles, from which as much serum as possible had been decanted, and $\frac{3}{4}$ of blood. No sinking of the corpuscles. Coagulated in six minutes.

63. A portion of the blood used in Exp. 59 to 63, set apart for comparison, coagulated in fourteen minutes, with a buffy part two inches deep.

Some of the conclusions from the preceding experiments may here be recapitulated.

1. There is a remarkable acceleration, after a few minutes, of the rate with which the red corpuscles sink in the *liquor sanguinis*; and in the serum alone, though to a less degree.

2. This acceleration may be increased by increasing the aggregation of the corpuscles; and prevented or reversed by preventing or destroying the aggregation of the corpuscles.

3. The sinking of the corpuscles may be slower in blood thinned by weak saline solutions than when mucilage is added with the salt.

4. The sinking of the corpuscles is slower in serum made thinner and lighter by weak saline solutions, than in serum made thicker and heavier by mucilage.

5. In the blood of the horse, the buffy coat forms regularly; and the red corpuscles unite, as if partly fused into each other, and collect into masses.

6. There may be no buffy coat, or but a comparatively thin one, on this blood, when it has been made thinner and its coagulation retarded.

7. The formation of the buffy coat is neither due to an attenuation of the *liquor sanguinis*, nor to a diminution of its specific weight, nor to slow coagulation; but to an increased aggregation and quickened sinking of the corpuscles.

8. These facts are favourable to the old doctrine of lentor, or viscosity of the blood and union of the corpuscles; and against the more recent doctrine of attenuation of the blood in inflammation.

9. The corpuscles of the horse sink much quicker in his serum than the corpuscles of man do in his.

10. Increasing the proportion of the corpuscles hastens coagulation and diminishes the formation of the buffy coat more than increasing the serum only.

11. Increasing the proportion of water simply, does not hasten the coagulation of the blood, as increasing the proportion of serum does.

On Galvanism applied to the Treatment of Uterine Hemorrhage.
By THOMAS RADFORD, M. D. (*From Prov. Medical Journal.*)

Uterine hemorrhage is usually divided into that which takes place in the early months, and that which takes place in the latter months of gestation. The latter class is again subdivided into what are called accidental hemorrhages, unavoidable hemorrhages, and the after hemorrhages. Accidental hemorrhages are those which arise from accidental causes; unavoidable hemorrhages are those which arise from a particular location of the placenta in the immediate neighborhood of the os uteri; and the after hemorrhages are those which take place after the delivery of the child, and they may occur either before or after the expulsion of the placenta. You will be also aware that there are a number of other uterine hemorrhages which are unconnected with gravidity; but it is my object in this lecture more particularly to dwell upon those discharges of blood which are connected with pregnancy in the latter months and with labour. It is not my intention, on the present occasion, to enter into a full consideration of the subject, but more particularly to confine my remarks to that condition which is the result of profuse and long-

continued bleeding, viz., exhaustion, a state highly interesting to the obstetrician, and which seems to me to require more than the recognized means for its management.

Now, we know that exhaustion may arise in all the varieties of hemorrhage; but we find that it is more especially produced by those impetuous and large discharges of blood which take place before, during, and after labour.

With regard to those cases of flooding, before and during labour, which have proceeded to a state of exhaustion, it has been the custom of many obstetrical writers to recommend the practice of delivery. Others have discountenanced delivery in this particular condition; and of course, where the principles of practice are unsettled in a case so important, it is very desirable that we should endeavour to discover some new method of treatment which shall place the question beyond dispute. Although such high authorities as Burns and Hamilton advocate delivery in these cases, it has always been my practice to recommend non-delivery; and if we were to analyse the cases that have been published in the reports of hospital and private practice, and those that have accidentally come to our knowledge, we should be startled at the immense loss of life arising from these extreme cases of hemorrhage, where delivery has been adopted.

Now, I regret to say, I believe that the great ruling influence upon the mind of practitioners, in determining them to deliver at all hazards in these cases, is the dread of popular opinion. It is usually stated that no woman ought to die undelivered; and where a woman does die undelivered, it produces a very considerable sensation, both in the neighborhood and in the mind of every party who may come to a knowledge of the circumstances. On this account a practitioner dreads the procrastination of delivery, lest death should occur before it can be accomplished, and his character consequently involved in censure. Now it appears to me, that when a practitioner is thus placed, he ought to possess sufficient moral courage to resist the pressure of popular opinion, and be guided by a higher principle in the discharge of his duty; and I am convinced that if the matter is fairly and dispassionately considered, it will be found that there is a great advantage in not delivering in these cases of exhaustion.

And first, with regard to the child, it is stated by the advocates for delivery, that there is the greater probability of its being saved by the immediate adoption of this operation, than by its delay. But if we take the pains to investigate the reports that have been published, as well as to examine into the results of the practice of private individuals, it will be found that the child is nearly always dead in these extreme cases. Therefore this consideration ought not to have much weight with us in deciding upon the principle of practice. And if we reflect upon the causes which give rise to hemorrhage, more especially in placenta prævia, we shall find sufficient reason for understanding why the child should be generally dead. In the accidental species of hemorrhage, if the cause has been such as not only to lead

to a separation of the placenta, but to something like a disruption or a wounded state of that organ, the death of the child is nearly inevitable; and in the unavoidable species, from the particular location of the placenta, if we recollect what must be the influence of labour upon the placenta itself, not only in producing detachment and a separation of its connection with the sides of the os uteri, but also the mechanical influence applied by the child's head coming upon it, we must see that in this case there is generally more or less of a disruption and breaking up of its structure; and consequently the child dies from bleeding from its own particular system.

If we go into inquiries as to the influence of the death of the child upon the hemorrhage, we must look upon it as being rather an advantage to the mother, because it takes off a certain demand upon the blood, or lessens what Hunter calls "the stimulus of necessity," and therefore makes such a change in the balance of her circulation, as would be a means of checking, rather than increasing, the discharge.

We will now proceed to consider the question as regards the life of the mother; and when we are contemplating a subject of this kind, a woman placed under extreme circumstances of inanition or exhaustion, we ought not to ask, "Ought a woman to be delivered?" but, "*Can a woman be delivered safely?*" That is the question we ought to endeavour to settle in our minds before we proceed to the operation. If we have a woman already in a state of exhaustion from large evacuations of blood, we must be certain that a plan of treatment which, in any way, produces an unfavorable change upon the nervous and circulatory systems, must add to the evils already existing. We have here sufficient prostration; and the mere emptying of the uterus will most inevitably increase it. Every surgeon is aware of the influence that is produced by the operation of tapping in cases of ascites in men strong in comparison of some of these poor women, reduced as they are by the loss of so large a quantity of blood. Syncope, nay, even death, is sometimes the result of the abstraction of the ascitic fluid. We know also in some cases, and especially where there is a particularly exalted state of the nervous system, or some particular idiosyncrasy, that simple evacuation of the uterus, by the natural efforts, will produce death! This very change then has in itself a very unfavorable influence upon a woman thus prostrated. But, besides this, we must bear in mind that there must necessarily be a great demand upon their powers by the stimulus of forcible delivery.

There are a number of other circumstances which ought to be taken into account, as regards delivery. And one of the most important of these is the physical or structural impediment that may arise from a rigid os uteri. And when we come to the bedside of a patient, (I am sure every gentleman who has had much practical experience, will bear me out in this statement,) we shall find that some of those dogmas which are laid down in books are wholly untrue. I now refer particularly to that assertion of certain writers, who say,

that by the evacuation of blood, the soft parts become so weakened and dilatable, that delivery can always be accomplished. This I most positively deny. And therefore I say that there are conditions of this kind which will be an obstacle to delivery.

The os uteri will continue *undilatable*, although the woman may be in such a state of exhaustion as to be literally tottering on the brink of the grave! It is true that this state of matters does not generally exist, but it is too frequent to be overlooked in determining our line of practice.

Again, we should be aware that hemorrhages take place, and produce this state of exhaustion, before the woman has progressed to that period of pregnancy that would justify a practitioner in having recourse to forcible delivery; and this is a point not sufficiently dwelt upon by obstetrical writers. In proportion to the early occurrence of hemorrhage, so will be the obstacles to delivery, as regards the introduction of the hand into the uterus. And when we are considering the chances of delivery, and taking into account the dilatable state of the cervix and the os uteri, we should never forget the length of the former as regards the particular period of pregnancy. And not only is this to be taken into account, but there is another circumstance which must not be overlooked, viz., the degree of subsidence of the uterus into the pelvis; for according as the uterus remains high in the pelvis, so we may be certain that the difficulties of delivery will be proportionate.

In all uterine hemorrhages connected with pregnancy, there are certain attendant circumstances, viz., separation of the placenta, with or without disruption of its structure; exposure of the large orifices connected with the uterine sinuses, rupture of the decidual vessels and atony of the uterus, which is either primary or secondary. The natural means for suppressing the discharge are the formation of coagula, and the contraction of the uterus. As to the adhesion of the placenta, when once separated, or the cicatrization of this organ when disrupted, the practitioner can place no reliance on them in checking the flooding.

With respect to the coagulation of the blood, it may become influential in arresting slight discharges, but never ought to be depended upon in those profuse hemorrhages which we are now more particularly considering. The coagula which forms in the vagina, and which are stated to be so important in the suppression of the bleeding, may become indirectly an evil instead of an advantage, by deterring the practitioner from making a proper investigation of the case, under the idea "that the disturbance of these coagula is death." In my opinion, the coagula which are more particularly to be depended upon, are those in the immediate neighborhood of the venous orifices that have been exposed, and I repeat that these are of no avail in the more serious cases; and therefore we must solely trust for the suppression of these large discharges of blood to that most important agent, contraction of the uterus.

The ordinary means of producing uterine contraction are so well known that I need merely refer to them before the present audience. We have the bandage, friction applied briskly over the uterus, grasping pressure, secale cornutum, the application of cold, and, in the after hemorrhages, the introduction of the hand into the uterine cavity. But all these means may fail in producing this desirable change, and will fail and do fail in the extreme cases.

A fatal case having recently occurred in this town [Manchester], which produced a considerable sensation at the time, where delivery was adopted, contrary to the principles which I had always publicly inculcated in my lectures, I was led to investigate the arguments of those who advocate that practice, more closely than I had perhaps ever before done; and it struck me that we were deficient in a means on which we might always depend for inducing uterine contraction, and so placing the woman in such a state of safety that the operation of delivery might be deferred. Whilst my mind was so much occupied upon this subject, I was consulted by my friend Dr. Goodwin, in a case of protracted labour, where the long forceps were required. The lady recovered well, with the exception of not being able to pass her urine. We administered all the usual remedies for a fortnight or more, using the catheter twice, sometimes three times a day, but without the least amendment. Upon Dr. Goodwin's suggestion, we decided upon the application of galvanism, which was undertaken by him, and the result was most gratifying, for the first application proved permanently successful. The decided efficacy of this plan in restoring the energy of the bladder, immediately led me to conclude that it was the very agent that I have already stated was a desideratum to ensure uterine contraction in cases of severe flooding, attended with exhaustion. We have here a woman reduced by loss of blood, with an atonic state of the uterus, either primary or as the result of the discharge. Now, as the advocates of delivery (*vide* Burns and Hamilton) say that this proceeding gives the woman the only chance of living, because, so long as the uterus remains distended by its contents, and its parietes atonic, those large venous orifices which have been exposed by the separation of the placenta, are so situated, that the chances of further effusion of blood exist; it occurred to me that the application of galvanism would so effectually act upon the uterine tissue as to induce firm contraction of its fibres, and thereby at once lessen those large openings, and bring the walls of the uterus into firm apposition with the body of the child, so as to entirely close them. This great object having been attained, we might safely procrastinate the delivery, and adopt such means as would tend to raise the vital powers of our patient, such as the administration of opium, stimulants, and support; and the performance of the important operation of transfusion. With the uterus in this favorable condition, our restorative means, and particularly transfusion, would be far more likely to be attended with successful results than if the organ were distended and atonic; for in this case, the

blood which is introduced into the system, either directly by transfusion or indirectly by nourishment, produces no permanent benefit, because it is rapidly discharged again. Analogy further led me to believe that my conjectures would not prove unfounded, for galvanism is particularly impressive in its influence upon the muscles of recently-killed animals, and we know how strictly allied in action, if not in structure, the uterus is to muscle.

I mentioned my views to a number of medical friends, who generally much approved of them; and I was soon enabled practically to prove their correctness, by being called in consultation to a case of frightful hemorrhage during labor, attended with extreme exhaustion, and where the os uteri was so rigid that the advocates of delivery could not possibly have carried their views into practice, without lacerating the os and cervix uteri. By this case I ascertained that galvanism produces an effective and powerful contraction of the uterus; and not only so as regards its tonic contraction, but it has also the power of energetically exciting alternate contraction when applied at intervals. I can tell you, most seriously and most solemnly, that it produces these two important changes upon the uterus in such a degree as, in my previous reflections on the subject, I had no conception of. The alternate contraction excited by this agent is analogous to, and as powerful as, that which is observed in normal labour, and the tonic contraction is greater. I shall not relate cases in detail, because it would occupy too much time; but I may state that I applied galvanism in a case where the membranes were unruptured, and the uterus in a state of great inertia, and alternate contraction was immediately produced. Before this the membranes were very flaccid; but as soon as the galvanic circle was completed, they became extremely tense, and protruded low down into the vagina; and this state of tension did not subside when the alternate contraction ceased, as is observed in some degree in normal labor; for although the galvanic conductors were removed, so great a degree of tonic contraction of the uterus had been induced, that this membranous bag could not collapse.

I am thus satisfied, that by the application of this means, we can induce such a state of chronic contraction in the uterus, that in these extreme cases of exhaustion from hemorrhage, the woman may be placed in such a state of safety, that delivery may be postponed until a time arrives when it can be safely accomplished, and in the meantime we can have recourse to those measures which tend to raise the vital powers.

I think it probable that it may also produce one of the other natural means of suppressing hemorrhage which I have already referred to, viz., coagulation of the blood; but this I have not yet positively ascertained by experiment, although I am led to conclude that such is the fact, from some remarks made by Dr. Apjohn, in the article *Galvanism*, in the *Cyclopædia of Practical Medicine*.

In my previous remarks, gentlemen, I must be understood to refer

to those cases of hemorrhage where the placenta is not placed over or near the os uteri ; but I shall now proceed to speak of those cases in which uterine contraction has a tendency to increase the discharge, cases which are usually described as belonging to the class, unavoidable hemorrhage. In these cases, where the peculiar location of the placenta deprives us of the benefits that usually accrue from uterine contraction, and as it is the special influence of galvanism to produce this effect, it ought to be the object of the obstetrician so to modify his practice, as to place them within the range of this remedy. Before entering upon a description of the plan which I would recommend to be adopted in these cases, I shall first direct your attention to the practice of the older writers ; and secondly, refer to the mode in which nature sometimes terminates them when left to herself. In looking over the authorities from 1612 to 1790, we find that they vary in their practice. Some recommend the removal of the placenta before the child ; others advise the same course conditionally, that is, providing it is offering itself very largely or decidedly to the finger of the attendant ; others again, say that where it cannot be pushed back, it should be brought away before the child. It must be understood that many of these writers had not a correct knowledge of the true anatomical condition of parts in cases of placenta pravia, and I do not think it necessary to enumerate their names, as it would be occupying too much of your valuable time. You will find that in some of these cases, where the placenta was brought away before the child, according to the statement of these writers, the latter was even born alive, and in most of them the hemorrhage was suppressed. And whilst on this subject, I may call your attention to a few cases of more recent occurrence, where this practice has been adopted. It happened to me in 1819, to have a case of placental presentation, where I detached the placenta, because it was hanging down so low in the vagina, that there was no chance of doing any thing else ; the hemorrhage was immediately suppressed, and the child expelled by the natural efforts. I am also indebted to my friend Mr. Jesse, who is present, for the details of a case in which he detached the placenta, and in which the hemorrhage thereupon subsided. It was the practice of the late Mr. Kinder Wood, of this hospital, in many of these cases, to detach and bring away the placenta, and afterwards to leave them to the operation of nature, or to extract the child by the feet, as the case demanded. A case also occurred to Mr. Wilson, of this town, who kindly related the circumstances to me ; the placenta had been rudely brought away by the attendant, and Mr. Wilson found the patient in a state of exhaustion, with the child still in utero. He extracted the child a considerable time after the removal of the placenta. It has occurred to me, in my hospital practice, to find that the placenta had been brought down in mistake by the midwives in these cases, and this without causing an increase of the flooding.

Smellie mentions cases in which the placenta was brought away,

and where the hemorrhage subsided. In Dr. Collins's Reports of the Dublin Lying-in Hospital, there is a case in which the placenta was brought away by the midwife the evening before the admission of the patient into the hospital, and the hemorrhage was thereby suppressed. Baudeloque relates a somewhat similar case. And now let us consider the method in which nature sometimes terminates labour where there exists placenta prævia; and for this purpose I have, without any great pains, collected 36 cases, illustrative of her powers in separating and expelling the placenta before the child.

Giffard mentions one case; Perfect, one case; Smellie, four cases; Chapman, one case; Ramsbotham, sen., six cases; Merriman, one case; Hamilton, two cases; Collins, one case; Barlow, one case; Dr. Robert Lee, two cases; Gower, one case; Millington, one case; Bailey, one case; Wood, three cases; Lowe, one case; Huut, one case; Wm. Lowe, three cases; Dorrington, two cases; and I have met with three cases of the same nature myself. Besides these, Mr. Jesse has related to me a case of placenta prævia, where the entire ovum was expelled; Mr. James Kenworthy, a similar case; and the late Dr. Rigby has published a case also. Now, the bulk of these cases, gentlemen, have been detailed without any specific practical object, and consequently are more valuable to my present purpose than if they had occurred to myself, and had been brought forward to serve my own particular views. You may refer to many of them yourselves; and you will find in nearly all of them that the hemorrhage was suppressed immediately after the placenta was thrown off.

These cases, then, and the practice already referred to, as adopted by the older writers, and several modern obstetricians, appear to me to furnish data of a most important character, whereupon a practice, adapted to cases of exhaustion from unavoidable hemorrhage, may be based, in order to bring them within the sphere of the application of galvanism. And before entering upon a description of my proposed plan of managing these cases, I beg to remind you that it is an established fact, that partial separation of the placenta, whether in simple or in complicated retention of that organ after labour, or in placenta prævia, is attended with far more profuse bleeding than total separation.

In the early part of the lecture, I stated that one means of adding to the exhaustion already existing, is the evacuation of the uterus, whether that evacuation be partial or entire; therefore I consider that in these cases of placental presentation, it would be a decidedly important point of practice to draw off the liquor amnii *gradually*, as the first step in the management of the case. For this purpose I have somewhat modified Mr. Holmes's instrument for perforating the membranes, making the canula much larger, and having an oval aperture placed on each side near its open extremity. The entire instrument consists of a canula and trocar, which latter always lies concealed within the canula, by means of a spiral spring, except when pushed out by pressure on its button-like extremity. This trocar can

be entirely withdrawn from the canula, so as to leave the latter free for the passage of fluid. Now I propose to pass this instrument through the placenta into the amniotic bag, and then remove the trocar, so that the liquor amnii may escape, a plan which I prefer to rupturing the membranes at the side of the placenta, because the water in the latter case would flow too rapidly, on account of the practitioner not being able to limit the size of the opening he might make, and also because by the plan now recommended, the integrity of the membranes being preserved, the placenta is thereby maintained in a better position for acting as a tampon against the open venous apertures when the head comes to press upon it.

In rupturing the membranes in the ordinary method, it is quite obvious that as the connection between the membranes and placenta is broken, the latter is liable to fall down more or less into the vagina. Having thus drawn off the liquor amnii, the next step will be to introduce the hand into the vagina, then to pass the fingers to the edge of the placenta, and carrying them on between it and the os uteri, to sweep the hand round its whole circumference, so as completely to detach the placental mass, care being taken to avoid rupturing the membranes. We have now brought the case into such a state as to be within the influence of galvanism; for although this practice of detaching the placenta may be a means of suppressing the bleeding, yet it will not restore the depressed powers of the woman; and on that account we still require an agent to induce such a degree of uterine contraction as will secure her from all chances of further hemorrhage, while we have recourse to such measures as will tend to support her strength.

In order, then, to insure uterine contraction, we must have recourse to galvanism, and the subsequent management of the case must be conducted on ordinary principles, such as supporting the woman by stimulants, nutritious articles of diet, and transfusion. The delivery should be deferred until the powers of the patient are so far rallied as to justify its being undertaken, however long the interval may be; and that mode adopted which makes the least demand upon her constitutional powers. It may happen that a repetition of the galvanic shocks may, after a certain period, induce such uterine action as will expel the whole of the contents of the organ; and if this should not happen, it appears to me that it would be the best practice, to apply the long forceps, having previously removed the placenta, that is if the head presents. If any other part of the child presents, the case must be managed on ordinary principles.

The novelty of these views may produce an impression unfavorable to their proper estimation, but I hope, gentlemen, you will recollect that it has been my object to bring them before the profession in order that their correctness may be tested. I wish to benefit poor suffering women in their hour of danger, and to be candid in my communications to my professional brethren. In my own mind I am satisfied as to the influence of galvanism, and its power of pro-

ducing uterine contraction. I am also convinced that it has no evil influence on the life of the child in utero, and after its birth that it is an important means of resuscitation in cases of asphyxia. Objections may be raised that we have not always the apparatus at hand. The answer to this objection is the same as that which refers to the application of all instrumental means. In my opinion, no gentleman who possesses the principles of a correct obstetrician, would carry his forceps, vectis, perforator, crotchet, or transfusion apparatus along with him. These things are to be sent for in emergencies only, and the same remark applies to the galvanic apparatus.

My remarks have hitherto been confined to the treatment of those cases of hemorrhage that are attended with exhaustion before delivery, but there are other cases to which galvanism is equally applicable. If we investigate the cases given by authors, we shall find that there are many cases of accidental hemorrhage before delivery, where artificial rupture of the membranes has not succeeded in arresting the discharge, on which account several writers, Burns and Hamilton amongst them, advocate delivery in preference to this operation. Now, the artificial rupture of the membranes is recommended for adoption without reference to the condition of the os uteri; and it must be obvious, if this part is rigid and undilatable, and the flooding should continue although the membranes have been ruptured, that it would be highly hazardous to introduce the hand and to deliver by force. In such a case galvanism would place the woman in a state of security, by exciting the contraction of the uterus. I also consider that this would be useful in some of the hemorrhages of the early months of pregnancy.

With regard to the after hemorrhages, especially those attended by exhaustion, I consider it particularly applicable where atony of the uterus is the principal feature of the accident. In those cases which occur previous to the expulsion of the placenta, it would be the duty of the practitioner to assure himself that this mass was not morbidly adherent to the sides of the uterus.

In hour-glass contraction, and other forms of irregular uterine action after labour, I anticipate great benefit from its use. In these cases there is a loss of balance between the contractile power of different parts of the uterine fibre, one part being in a state of atony, whilst the other is in a state of firm contraction. Now, if the galvanic current be directed in the longitudinal axis of the organ, it strikes me that you might excite the longitudinal fibres to contraction, and thereby restore the balance.

There are several other topics not directly connected with the subject of this evening's lecture which I shall slightly notice, in reference to galvanism. I am satisfied from positive trial of the remedy, that it will be found a most important agent in tedious labour, depending upon want of power in the uterus, and where no mechanical obstacle exists. I would also suggest the probability of its proving valuable in originating uterine action *de novo*, in cases where it

may be considered necessary to induce premature labour. It seems to me also to be worthy of trial in certain cases of menorrhagia in the ungravid state, where, on vaginal examination, the uterus is found to be atonic, as evidenced by its large flaccid condition, and the patulous state of the os uteri.

Having made this digression, it is proper that I should remark, in reference to cases of hemorrhage, that I am not urging this plan of treatment upon the profession, with the view of superseding the ordinary means, but rather with the view of supplying a remedy in those extreme cases where these have failed. I do unhesitatingly say that the obstetrician has the power in most cases to controul uterine hemorrhage, so as to prevent them ever reaching this extreme state of exhaustion. But, nevertheless, we do meet with this condition frequently in a large hospital practice, and also in private consultation practice. A number of cases have come to my knowledge within a very few months, where death have resulted from this excessive exhaustion. I therefore say that we ought to have some more certain means than delivery to depend upon in these cases; for, if this expedient be so important a means of saving life, how is it that it so often fails?

With regard to the mode of applying galvanism in these cases, I have used an electro-magnetic apparatus, contrived by Messrs. Abraham and Dancer, of this town, for medical and other purposes. It consists of a battery in a small jar, and a helix with conductors. For the sake of convenience, the latter are connected with the helix by means of long wires covered with an isolating material. The strength of the shock is regulated by a small contrivance situated on the stand of the helix, by means of which it can be either diminished or increased. One of the conductors, which is applied externally, has a hollow wooden handle, through which passes the wire before alluded to, in order to join a brass stem terminating at its extremity in a ball. The other conductor, which is contrived by myself, consists of a strong brass stem, seven inches long, curved to suit the vagina, and covered with a non-conducting material, having a small screw at its distal extremity for attaching it to a silver ball; at its other extremity it is received within an ebony handle, which is hollow, and through which passes a strong brass wire, looped at the end, and connected with the long wires before alluded to. This wire is kept disconnected from the brass stem by means of a spiral spring concealed within the ebony handle. The loop is covered with silk, and is intended for the thumb of the operator, when he is bringing the wire into connexion with the stem.

When the remedy is applied, the brass ball of the vaginal conductor is to be passed up to the os uteri, and moved about at intervals, on to various parts of this organ. At the same time the other conductor must be applied to the abdominal parietes over the fundus uteri. Shocks may be also passed transversely through the uterus by simultaneously applying the conductor on each side of the belly.

The application should be used at intervals, so as to approximate in its effects as nearly as possible to the natural pains. It may be continued until it meets the exigencies of the case.

An Account of the Epidemic Erysipelas; with Cases. By R. G. WHARTON, M. D., of Grand Gulf, Mississippi. (From the New Orleans Medical and Surgical Journal.)

During the months of April and May, 1844, and the first quarter of the present year, the town of Grand Gulf suffered very much from an epidemic, which has been described very properly by Drs. Hall and Dexter in the January No. (1844.) of the American Journal of Medical Sciences, as an erysipelatous fever; the same disease has, since that time, prevailed very extensively in isolated localities throughout most parts of the United States, and even now, is sweeping with unabated violence over many parts of this State. It has assumed in no place a more malignant form than it did in this town; and I am, consequently, enabled to give a description from observation of a form of disease, which whether we regard its frightful appearance, or, in many cases, its intractableness to all remedial means, is unsurpassed by cholera. The name of *black tongue*, accorded to it in the newspapers, was well calculated to inspire terror at its approach, and though unappropriate and vague, that very vagueness rendered it more fearful.

It attacks in so many different forms, and assumes such a variety of appearances, that it is impossible to give any description which will apply to all cases. The first cases assumed the form of acute laryngitis of the most obstinate kind, and several proved fatal in spite of the most active depletion by the lancet, frequent emetics of tartar emetic, warm baths, and blisters to the throat. At the time, I did not suspect this inflammation to be of the erysipelatous kind, but in a short time I became convinced that it was. These cases occurred in March, 1844. Early in April, several were suddenly seized with violent fever, swelling and slight redness of the parotid glands, headache, drowsiness almost approaching to stupor, severe pain in the ear and pains in the limbs. In the course of 36 to 48 hours, the swelling and inflammation extended from the parotid to the larynx, producing all the symptoms of acute laryngitis, such as great difficulty and pain in deglutition, which was performed with a convulsive effort, and with a gurgling sound; small quick pulse, tenderness on pressure of the larynx, anxious countenance, &c.

After these symptoms had continued for two or three days, or had been somewhat relieved, a slight swelling and great tenderness and redness might be seen in some part of the face, generally about the

ear or in the ear—sometimes about the nose; the throat symptoms, though much slighter, still harassed the patient; there was a constant hawking up of a tough mucus, and a difficulty of deglutition different from that first experienced, and now depending apparently on a paralysis of the muscles of the throat. The uvula and velum were of a dark purple, and very much swollen; also the tonsils in many cases; the pulse rose very much in frequency as the swelling of the face progressed; and the drowsiness or stupor also kept pace with it. The swelling extended rapidly, and involved, in most cases, the whole of the face, ears, forehead, and, in a few cases, the whole scalp, sometimes extending down the breast or back. In these cases there was total blindness for five or six days from the swollen state of the face and eyelids; and the patient generally lay either drowsy, with a muttering delirium, or stupid; feet and hands cool or cold; head hot; with great pulsation of the carotids. The pulse is now very weak and rapid, and it is with the utmost difficulty, that the patient takes any medicine or water. In favorable cases, the swelling gradually subsides, first on that side of the face on which it commenced; a copious secretion of purulent matter forms under the cuticle; the eyes open; fever gradually abates; and in the course of eleven to fifteen days the patient is convalescent. It may prove fatal in the early stage, (if not actively and promptly treated,) from suffocation. Laryngeal symptoms in the swelling even may subside, and matter may be freely secreted, yet there is an absolute impossibility of swallowing, from the paralysis of the muscles of deglutition; nervous symptoms supervene—tremors; inability of urinating, and the patient dies about the tenth day, sometimes as late as the fifteenth.

This was the form the first cases assumed; but soon after others occurred, in which the first symptoms were precisely similar to those above detailed; there was violent fever; pain and swelling of the parotids. Sometimes, however, these glands were unaffected, the disease attacking the muscles and tendons on the side of the neck, causing the most excruciating pain, swelling and tenderness on pressure; there was soreness of the throat, pain and difficulty of deglutition, the fauces were of a dark or livid color, the tonsils were enlarged, and patches of ulceration might be observed, or a tough mucus, which looked like ulcers. In these cases there were severe pains felt in different parts of the body, generally on top of one or both shoulders, shooting up the sides of the neck; sometimes there was violent pain in the feet and legs. Numbness of limbs was a very general symptom. Though these cases constituted a much milder form of the disease than the first, the pains were often excruciating, the fever very high, with a pulse always frequent, sometimes strong and full.

Sometimes, without any external inflammation, the disease attacked the lungs, producing the most malignant form of pneumonia; sometimes the stomach and bowels, producing the most intractable form of gastritis or enteritis. We consider these to be cases of ery-

erisipelatous inflammation, because they appeared at the same time, in the same families, some members of which were attacked in this manner, others with the other forms of the disease; and because these are symptoms common to nearly every form of it. I had one patient who was attacked in the usual manner, with chill and high fever, violent pain in the side of the neck, with soreness, pain, and difficulty of deglutition, pains in the limbs. He was relieved in the course of four or five days; when, from imprudent exposure to the sun, he relapsed, and the disease attacked the lungs, stomach and bowels; producing pneumonia with gastro-enteritis, which nothing could relieve. In the relapse there was severe pain in the neck, and sore throat. Again, in other cases, after suffering for two or three days in a slight degree with fever, pain in the neck, and sore throat, the patient was attacked in the stomach with nausea and vomiting, and other symptoms of gastritis which was, as far as I have seen and heard, always fatal. When the viscera, lungs, stomach, or bowels were the seat of the disease, I have never yet seen a case recover. It generally attacked these organs when the patient was in general bad health, was addicted to habits of intemperance, or dyspeptic; always attacking the weakest organ. In these visceral cases there was a degree of malignancy which I have never before witnessed in any disease. In the course of a very few hours the countenance is entirely changed and collapsed; the pulse not very weak and not very frequent; the prostration of strength astonishing. You may bleed—which, however, must be cautiously done; cup, bathe and blister; and though you reduce the patient by these means as much as you dare, he still complains that the pain is only partially relieved, and the disease proceeds with more or less rapidity to a fatal termination, while the physician can scarcely even palliate symptoms.

I had a number of slight cases characterized by chill, fever, pains and numbness in the arms and legs, pain and soreness in the side of the neck, slight soreness of the throat. These were generally relieved in the course of four or five days; the patient, however, was left in a very weak and languid condition for several weeks.

The tongue, in most cases, where the stomach was not particularly affected, was not much changed from its natural state; sometimes it was dry and glazed, and in a few cases it was covered from the beginning, with a heavy coat of dark fur.

I saw several cases where the violence of the disease was concentrated in the muscles of the neck, causing the most exquisite tenderness and swelling, which often, in the course of two or three hours, was as large as a hen's egg; this swelling and tenderness would remain stationary for several days, and then disappear, or disperse, by extending in the form of erysipelas of the skin around the neck.

In all forms of the disease there was a remarkable tendency to relapse. Often, when the patient was apparently out of danger, the slightest imprudence was sufficient to produce a relapse of the most formidable kind.

The question whether or not it be contagious, was much agitated on its first appearance here; sufficient proof, however, has since that time accumulated to convince the most sceptical that under certain circumstances it is contagious. It may be taken by inoculation; several cases of this kind have occurred in this county. One of them was that of a physician, who lost his life in consequence. When proper cleanliness and ventilation are neglected, it is very apt to be communicated to the nurses and attendants. This is not peculiar, however, to this disease, but is common to it with many others not usually considered very contagious. By observing the precautions of cleanliness and free ventilation, every member of one family, the head of which had a most violent attack, escaped entirely; whilst in another family, where these wholesome safeguards were neglected, the disease attacked every member, several of them more than once. I have thought that those cases where the throat was deeply affected were most contagious; probably from the fact that the breath of the patient is then more highly charged with the morbid miasm.

Prognosis. Those cases where the viscera are attacked, are, so far as I have seen or heard, been always fatal, and especially if our remedies produce only a partial relief. While the pulse is weak and compressible the prognosis is unfavorable. Next in the order of malignancy are those in which there is deep seated disease, swelling and ulceration of the throat, while the face is swollen at the same time. In these cases, if the mind remains clear; if our remedies, especially emetics, are borne well, and if the pulse, though small and rapid, does not give way; and if the nerves are not much affected; though most dreadful, we may entertain a reasonable hope of recovery. The intemperate, and those delicate constitutions whose viscera are unsound, and those of advanced age, are those most likely to succumb under an attack.

Treatment. From the description which has been given of the various forms which this disease assumes, it will at once be readily understood that considerable modification is required in the remedies in consequence of this variety; and that, like all other disease, it must be treated according to the indications in each particular case. When the erysipelas attacked the face and head; and when the throat was at the same time affected, as was the case when the disease first appeared; if the pulse was full and strong, as it was in nearly every instance, free and early depletion with the lancet was indispensable. I had to bleed most of those who suffered under this form of the disease twice, with most happy effect. A few cases occurred in this form in old and debilitated, or intemperate subjects who could not bear the lancet. The next remedy, and a most important one it is, is the free exhibition of antimonial emetics; the laryngeal symptoms here were most urgent, and nothing has such a controlling power over them as tartar emetic. Besides relieving the patient of the symptoms of suffocation, which were most distressing

and alarming, the frequent exhibition of emetics had a most happy effect in keeping down the arterial excitement, which ran high; it equalized the circulation, and removed the stupor caused by so great a determination of blood to the head. This emetic, or nauseating course, I had to pursue in some instances for three, four, or even five days.

The throat required some especial remedies; and when the velum and uvula were swollen, as it was in many cases very much from the commencement; free and deep incisions were necessary to relieve the patient of the difficulty of breathing and deglutition; and after this had been done, or without it, when the parts were not much swollen, but very sore and ulcerated, a strong solution of argent. nitrat. (3i. to ʒi. water.) as recommended by Tissot in chronic laryngitis, was applied to the throat by means of a mop or sponge fastened to the end of a whalebone, being careful to make the patient take a little salt and water in case any of the solution might be swallowed. I saw several cases where the uvula and velum were so enormously swollen as almost to impede the entrance of air into the larynx. By free and deep incisions a large quantity of purulent matter was discharged, to the great relief of the patient.

Many of these cases were most distressing to witness; the patient lay drowsy or perfectly stupid, snoring, his face enormously swollen, and of a dark purple color, almost black, so that it would be impossible for his friends to recognize him; eyes closed, a constant sense of suffocation, extreme difficulty (sometimes, for seven or eight hours, an actual impossibility) of swallowing, and it was necessary to raise him to a sitting posture every time he attempted to swallow. This motion almost exhausted him. The pulse is weak and rapid, and altogether the case appears desperate. After remaining in this apparently hopeless condition from 24 to 48 hours, the throat appears a little better; the patient can, by great exertion, take a little water; and now a state of collapse or great debility occurs; and by the cautious exhibition of carb. ammon. and quinine, the pulse becomes firmer, more steady, the swelling of the face rapidly subsides, and with the improvement in swallowing there is a return of appetite.

The convalescence is most tedious; desquamation of the cuticle takes place; large collections of pus form under the cuticle, as well as in the deep seated cellular substance, requiring deep incisions to the bone to discharge it. For a long time the patients looked badly; the skin was red and claret colored, like that of a patient recovering from the small-pox.

In those forms of the disease where the internal organs were attacked, though the indications were plain, unfortunately medicine afforded only a temporary relief. The pulse in these cases was weak and soft; and though the severe pain seemed to require venesection, great caution was necessary in its use, on account of the prostration of the general system. I bled, however, a majority of the patients attacked with this form of the disease, and some of them two or

three times, and yet I could attribute only a very temporary amelioration of symptoms to it.

Cupping was resorted to, and carried as far as could be borne; and this, too, afforded only a partial relief.

Hot mustard baths was the remedy on which I placed the greatest reliance, both on the general principle of a strong revulsion, and especially because it appeared to be the only remedy which afforded more than a very slight mitigation of the patients' sufferings. I usually ordered it from three to six times in the 24 hours, and continued it each time, as long as the patient could bear it.

Large blisters were applied over the seat of the pain, and in most cases it was difficult to get them to draw; like all the other remedies, however, they afforded little, or only a very partial and temporary relief.

Calomel and opium, in large doses, were used in addition to the revulsive means; and this, too, instead of doing good in many cases, evidently aggravated the symptoms, inducing irritation in the bowels, and great distress; and thus, in spite of every rational resource, we were destined to see our patients, in the midst of the most horrid tortures, snatched away by the relentless hand of the scourger.

In some of these cases, however, towards the close of the disease the patients sunk into a state of quiet delirium, unconscious of every thing; and with little suffering, breathed their last; the sensibilities having been previously exhausted by the violence of the pains. In one case that I saw, the force of the disease was concentrated on the feet and legs, producing the most excruciating pains, as severe as an attack of the gout, extending up the body; with great restlessness, fever, full and strong pulse. In this case I bled freely; and at the suggestion of my friend, Dr. Wilson, of Port Gibson, (who saw many of these cases with me, and whose practical suggestions in all cases of disease are characterized by a discriminating tact rarely met with,) had the patient's feet and legs immersed in a hot lime bath, made by dissolving one gallon of lime in four gallons of hot water. This had a most happy effect in relieving the pains, and, together with other means, which were indicated, soon restored the patient to health. There were a number of cases comparatively mild where the violence of the disease was spent on the face and head, producing fever and pain of the face, which was so much swollen that the person could not be recognised, nor see at all for several days. The patients were very drowsy—constantly in a state of muttering delirium; the feet and legs disposed to be very cold, with great heat of head. In these cases the throat was unaffected; consequently there was no difficulty of deglutition; the pulse, though frequent, being sufficiently firm; there was, besides, no malignancy. A very simple course of treatment was sufficient for these. Mild saline purgatives, the constant application of cold cloths to the head, and hot mustard baths to the feet and legs, wherever there was much delirium or stupor; these were the means which being persevered in for six to ten days,

would always bring the case to a favorable issue. A mild anodyne at night was sometimes required in the latter stages of these cases.

There were a number of other cases in which the patients complained of severe pains in the sides of the neck, shooting down the arms; soreness of throat, with considerable difficulty of deglutition; fever, severe headache, numbness of the limbs, and a great depression of spirits, attributable in part to the alarm occasioned by the prevalence of the epidemic. The stomach was generally irritable; the tongue red; pulse weak, and rather frequent. All these cases were successfully treated by hot mustard baths, and copious draughts of a strong hot infusion of eupatorium perfoliatum, which produced a copious perspiration, which was kept up for two or three days, to the great relief of the patient.

I have said nothing as yet about the local treatment for the erysipelas when it attacks the surface, being well convinced from large experience that no local applications have any great effect in the worst cases, and in the milder cases they are not much required. I have, however, in nearly every case endeavored to arrest the progress of inflammation by surrounding it with blisters, or cauterising the skin around with argent. nit. In many cases the disease was arrested by the lines drawn around it; but in the bad cases where such effects were most desired, they did no good—the inflammation extending as rapidly as if they had not been applied. I have covered the face with mercurial ointment, and have applied nearly every kind of lotion, and from the result of this experience have as much faith in cold water as in any other one remedy. Still it is well to try a variety of them, as there are some patients who receive more benefit from certain lotions than others. For this purpose we may use solutions of sal. ammon., plumb. acet., a mixture of equal parts of alcohol and ether, &c.

CASE 1st.—April 6th, 1844, called to see Mr. T. A. Applegate, who was the first one attacked with the erysipelas of the surface. He was taken down the day previous with high fever, swelling of the parotid glands, inability to protrude the tongue. He was very restless—severe headache—tender on pressure over præcordia—drowsy, and rather stupid. Bled to xxvi , cupped over the stomach, and ordered warm bath. 9. P. M.—Bath produced perspiration, but the fever continued high. 7th. Rather better this morning; still considerable fever; gave mass. hyd. grs. xii. At 7 P. M. not much better; complains of general fullness about the head; ordered blister to nape of neck. Was called up at one o'clock, A. M.—found him laboring under acute laryngitis, the inflammation having extended from the parotids, which were still very much swollen and inflamed. There was considerable difficulty of deglutition, which was performed with a convulsive effort, and with a gurgling noise; there was also tenderness on pressure of the top of the larynx. Used frictions of Granville's liniment to the throat, without benefit. At 4 A. M. he was much worse; gave emetic of tartar and ipecac., which af-

forded considerable though temporary relief. 8th, at 6 A. M., in a very bad condition; countenance frowning; extreme pain in swallowing; pulse quick and tense; frequent watery discharges from the bowels. Bled to $\frac{1}{2}$ xvi; ordered laudanum enema, and applied emollient poultices of onions, tansy and rue, as hot as they could be borne, changing them every fifteen minutes. The poultices had a most happy effect in relieving the urgency of the laryngeal symptoms; much better than blisters to the throat, which I now never use in such cases. At 12 M. still improving, can swallow without that convulsive effort so characteristic of laryngitis. At 3 P. M. pulse 100, soft; free perspiration—gave 10 grains Dover's powder at bedtime. 9th. Slept well—pulse 90, soft; feels much better, still there is considerable pain in swallowing; has much thirst. Ordered $\frac{1}{2}$ grain tartar. antim. every two hours, and the hot poultices to be continued to the throat. Visit at 9 P. M. He had vomited two or three times during the day; spits frequently a tough mucus which is secreted in large quantities; pulse 100, quiet; had two operations; ordered 6 grains Dover's powder; discontinued the poultices. 10th. Passed a tolerable night. At 3 P. M., he was rather drowsy and stupid; pulse 110. Ordered the solution of tartar every two hours; this reduced the pulse to 104 by 9 P. M. and produced free secretion from the throat, which appears to be almost entirely relieved. There is still, however, a great determination to the head with considerable discharge from the nostrils. He complains of tenderness and swelling of the left side of the face, in front of the ears. 11th. Face still swelling on the left side. Ordered the tartar water during the day; at night gave hyd. chlorid. mit. grs. vi.; pulv. jalap gr. iv. to relieve the bowels. 12th. The face very much swollen this morning; pulse 110; medicine acted well on the bowels, with some relief; scarified the velum and uvula, which were very much swollen, and impeded the passage of air. I now became aware of the necessity of arresting, if possible, the extension of the erysipelas, and for this purpose surrounded the inflamed parts with strips of emplastr. epis., about $1\frac{1}{2}$ inches broad, and covered the face with unguent hydrar. At 7 o'clock, A. M., no better; pulse 116; gave hyd. chlorid. mit. grs. viij. 13th. Medicine taken last night operated once; pulse 100; blisters drew well; face still more swollen; quiet, disposed to sleep. 3 P. M., pulse 120; still drowsy, intelligent when aroused; great difficulty of swallowing from apparent immobility or paralysis of the muscles of mouth and throat. Ordered carb. amm. of which he took two doses without any good effects. 14th. Passed a tolerable night; pulse during the last night varied from 120 to 112, changing every half hour; it is now 112. Ordered 2 grains quinine every three hours; this had a fine effect; under its use the pulse became firmer and more steady. 15th. Much better; pulse 108; continued quinine; the swelling is now abating; swallows much better. Ordered light broths, with a little wine whey. 16th. Improving rapidly; pulse 88; continued qui-

nine every two hours. 17th. Pulse 82; quinine, broths, wine whey; at bedtime ordered a dose of laudanum to quiet the bowels. He was now rapidly recovering, and in the course of four or five days was able to sit up. Large quantities of purulent matter formed on the cheek bone and between the upper eyelids, which had to be opened with a lancet.

CASE 2d.—The following case has some peculiarities, worthy of notice. It is the only one that I saw where the tongue was so much affected. June 5th, at eleven, A. M., called to see W. Gott, a boy aged sixteen, who had returned from school about two hours before, complaining very much of his tongue, which he said felt very sore, and was swelling rapidly. Found him with a frequent pulse, rather hot skin, complaining of his tongue as well as a pain on each side of neck, the surface of which looked a little red, and was painfully sensitive to the slightest touch. The tip of the tongue for an inch was very much swollen, and there were several white specks on it. Ordered warm mustard baths, blisters to the painful surface of the neck, red pepper tea as a drink, and as a gargle or mouth wash. At four P. M. he was much worse, his tongue enormously swollen, so that his jaws could not be closed, and he could not speak; great difficulty of swallowing, mind stupid, does not complain of pain in the tongue. Pulse 120, and very small; great heat of skin. Ordered mustard bath again—in two hours bled to xxvi , cupped on back of neck and behind the ears, to relieve the determination to the head. I requested Dr. Wilson, of Port Gibson, to meet me; we applied a strong solution of argent. nit. to the fauces, which appeared ulcerated and dark colored, and scarified deeply under the tongue. At midnight ordered another bath, and gave strong infusion of serpentaria and chamomile flowers. 6th.—Somewhat better this morning; head clearer; pulse 120, and rather small; continued the infusion. Swelling of the tongue subsided, so that he could articulate. Throat better; repeated the caustic, and gave a cathartic last night of sulph. magnes. which operated well. There was not much change during the day—at midnight was sent for in haste, and found him suffering from intense pain of the throat, so that every breath caused him to cry out; pulse 120, weak and quick, skin moderately hot—mind not clear. Ordered him to be put in a mustard bath for twenty or thirty minutes, and a large blister to be applied to the abdomen. 7th.—Somewhat easier, though not relieved of the pain. Countenance bad—sleeps with eyes half open—rather delirious; pulse 130, weak and irritable. Continue the chamomile and serpentaria with eupatorium. Towards evening became much worse; the pain left the stomach and bowels, and attacked the throat, so that every inspiration caused him to cry out as if he had been stabbed. The pain was deep seated, and changed its seat constantly—first on the right, then on the left side; pulse 140, weak and quick; countenance more cadaverous. Again used the hot bath, as it was the only remedy which seemed to afford even a temporary respite to his agony. The

skin having relaxed, added 3 grains quinine to the other medicines. 8th.—Pulse intermitting; delirious all night; skin cool and relaxed; talks coherently when roused; pain still severe, though much lighter; pulse 140 to 150; gave the quinine in large doses, but as it did no good, and he was sinking fast, discontinued every thing. He expired about day, on the morning of the 9th. This boy was apparently of a good constitution. His family had suffered very much from the erysipelas for six or seven weeks, and his was the last case that occurred during the last year. The attack appears to have been brought on by his bathing in a muddy pond of water during the heat of the day.

CASE 3d.—April 26th, 1844. Visited Mr. Calahan, who was suffering with acute pains in the feet and legs, arms, stomach and bowels. Pulse 85; stomach tender on pressure; tongue clear and rather red; no headache. As he had taken some cathartic pills over night which operated harshly, ordered nothing but a hot bath. At 7, P. M., the bath had not relieved the pains, which were very severe in the abdomen. Cupped very extensively. 27th. Passed a very restless night; the pains are very severe in the hollow of both feet, and in both big toes, one spot being particularly painful. The pain extends from this up the legs and thighs; pulse 80, and rather full; skin hot; very restless. Bled to 3xxiv; put him into a hot bath. 11, A. M. The bath relieved him for one or two hours; as the pain in the abdomen is severe, cupped again, and gave the following: R. mass. hyd. grs. vi., extract conii. grs. iij. M.; ordered the bath again at 1, P. M. At 2½, P. M., more quiet, and easier than he had been; dozes occasionally; pulse 80, and softer. Says the pains are much slighter, though still severe. Ordered the same dose at 4, P. M. At 6, P. M., complains very much of the pain in his feet and legs, which is very excruciating; has a most distressing nausea and vomiting. Requested Dr. Wilson to see him. We had his feet and legs immersed in a hot lime bath several times during the night, and applied a large blister to the abdomen. The bath relieved the pain very much; the nausea was partly relieved by the blister. 28th. Slept very little, skin hot; pulse 85; complains still of nausea. Gave sulph. morph. gr. i, and as soon as the stomach is composed, ordered hot infusion of eupatorium perfoliatum and a general warm bath. These means relieved him very much. At 8, P. M., complained of inability of urinating—relieved by sp. æth. nit. and emollient fomentations over the bladder. 29th. Slept rather badly, feverish, some pain in the abdomen. Another bath, with the infusion of eupatorium. This again relieved him, and in a day or two he was convalescent. This case differed very much from the ordinary forms of the disease; still I class it with them as it occurred at the same time, and in a family where several others were then suffering with the more common forms of the disease. I have seldom seen a patient suffer more than did this one from the pain in the feet and legs, and I feel confident that without prompt treatment he would have sunk under it.

BIBLIOGRAPHICAL NOTICES.

A new edition of "Ramsbotham's Process of Parturition."—Messrs. Lea & Blanchard have recently re-published the last London edition of this invaluable work, carefully revised and considerably enlarged. Ramsbotham's Process of Parturition, has been so long and favorably known to the profession in the United States, that it needs no commendation. It certainly stands at the head of the long list of excellent obstetric works published within the last few years in Great Britain, Ireland and continental Europe. So far as respects the science and practice of midwifery, both in description and demonstration, it is comprehensive and complete, leaving little if any farther to be desired in this department. We consider this book indispensable to the library of every physician engaged in the practice of midwifery.

The present edition contains six additional figures, and fifty-nine pages of interesting and useful matter, worth alone the price of the whole work.

J. A. E.

A new edition of Professor Meigs' Translation of Velpeau's Midwifery; with notes and additions, by William Harris, M. D. Published by Messrs. Lindsay & Blackiston, Philadelphia.—If the reputation of this work, were not already sufficiently established in the United States, the names of Velpeau and Meigs would be ample recommendation; but we can with propriety and truth say, that it is rendered much more perfect and valuable by Dr. Harris' interesting and useful notes and additions.

J. A. E.

PART III.—MONTHLY PERISCOPE.

The chemical phenomena of Digestion.—MM Bernard de Villefranche and Barreswill, whose researches on digestion we some time since published in the Lancet, have addressed another communication to the French Academy, in which they observe, "We formerly stated that the gastric juice contains two active principles, 1° free lactic acid, 2° an organic matter, which is precipitated and destroyed by a heat of 85°, or 90° cent. It is the presence of this organic matter which gives the gastric juice its digestive power, since it loses

this power, when the said matter is destroyed by an elevated temperature.

One of the remarkable properties of this organic matter is, that its digestive powers vary, according as it is associated with a fluid having an acid or an alkaline reaction. Thus, in the gastric juice, which is acid, it readily dissolves (as is well known) azotized substances, fibrin, gluten, albumen, &c., whilst it is altogether without action on starch.

The object of the present paper is to show, that if we destroy this acid reaction of gastric juice, and render it alkaline by the addition of carbonate of soda, its active organic matter, being now in presence of an alkaline fluid, changes its physiological action, and becomes able rapidly to modify starch, whilst it loses its power of digesting meat and azotized substances. As the latter is exactly the character of saliva and the pancreatic fluid, it was interesting to know whether a change in the chemical reaction of these two fluids would produce in them the same change of properties as in the gastric juice. Our experience has demonstrated that it does so. If we render the pancreatic fluid, or the saliva, (which are both naturally alkaline,) acid, we invert their ordinary action, and give them the power of dissolving meat and azotized substances, whilst they lose their influence upon starch.

The numerous and varied experiments related in this memoir fully support these assertions, and prove that in the gastric juice, the pancreatic fluid, and the saliva, exists an organic principle, an active agent of digestion, which is common to all of them, and that it is the nature of the chemical reaction associated with it, which alone determines their power of digesting the different alimentary principles.

In an alkaline fluid, all three have the power of transforming starch, and do not digest meat, whilst in an acid fluid they dissolve meat, but do not act upon starch. Thus, it appears easy to transform these fluids into each other, and to make an artificial gastric juice from the pancreatic fluid, and *vice versa*. The action of saliva, however, is less energetic, whether on meat or starch, than the pancreatic juice.—*Comptes Rendus. Lancet.*

Antagonism of Cachexia.—In the Foreign Department will be found a brief analysis of an essay lately published by M. Trousseau, (the well known pathologist, and professor of therapeutics in the Faculty of Paris,) to which we wish to draw attention. The views contained in this essay are ingenious, and deserve to be seriously considered; although they are much too speculative to be adopted in the present state of medical knowledge.

M. Trousseau first points out, in an extremely lucid and forcible manner, a fact in general pathology which is generally admitted, although often lost sight of, viz., that anæmia, as indicated by the changes that take place in the composition of the blood, is the pre-

dominant symptom of very varied morbid states, each of which requires different treatment. So far every one will agree with the Parisian professor. This, however, cannot be the case when he attempts to establish a kind of antagonism between these varied cachectic states,—when he asserts, for instance, that the cachexia of chlorosis preserves from that of tuberculization, and that by restoring, through the agency of ferruginous preparations, to its normal condition, the blood of a weak, or chlorotic person, in whom there is the slightest predisposition to phthisis, we expose him to immediate manifestation of the latter disease. M. Trousseau, it is true, asserts that this opinion is the result of lengthened experience; but we have a right to question his interpretation of the facts he has seen, when we find it running counter to the experience of the great majority of physicians. That chlorosis does not so often lead to phthisis as might be expected, when we consider that it is a disease of debility, we must admit. The chlorotic cachexia is evidently different from the tubercular cachexia, or we should not see so many young females remain during several years in an anæmic condition, and yet ultimately rally, under proper treatment, without tuberculization taking place. But there is a great difference between admitting that such is the case, and looking upon the chlorotic cachexia, along with M. Trousseau, as absolutely guaranteeing persons against scrofula and phthisis. It is difficult to believe that a disease which breaks up the health, depraves the fluids and the solids of the body, and gradually depresses its vitality, should preserve from another disease, the manifestation of which is generally considered to be induced precisely by those causes that tend to reduce the powers of life. It is equally difficult to believe that a therapeutic agent which is calculated to restore the diseased blood of a chlorotic patient to its normal state, should expose that individual, as M. Trousseau says it does, to the attacks of phthisis, precisely because it vitalizes and animalizes the animal fluids.

M. Trousseau has, we believe, fallen into the very error with which he reproaches M. Rayer, when the latter recommends iron in albuminuria, on account of the anæmic state of the blood. He has allowed himself to be led away by a theory. That theory is, the antagonism of cachexiæ, which may exist even to the extent supposed by M. Trousseau, but the existence of which has certainly yet to be proved.

The learned professor brings forward, in support of this view, the reputed antagonism of intermittent fever and phthisis. Our readers will remember that we have, at various periods within the last few years, laid before them accounts of the labours of different continental practitioners who assert that there is an evident antagonism between the cachexia of intermittent fever and that of phthisis, and that in marshy districts, where all the population is more or less under the influence of the miasmatic cachexia, scrofula and phthisis are nearly unknown.

The recent researches of French pathologists have rendered it very probable that such really is the case, but they cannot be said to have proved it. M. Trousseau's views respecting the antagonism of chlorosis and phthisis were, most likely, suggested to him by the discussions which have taken place on that subject. He has endeavored to generalize a principle of pathology, which he has accepted as proved, although, in reality, it is yet *sub lite*. Such an attempt at generalization cannot but be looked upon with interest, especially when made by a man of M. Trousseau's scientific authority, but it ought not to be adopted without due reflection and proof.

Although we are thus inclined to receive with doubt and suspicion the theory of "the antagonism of cachexiæ," yet we must confess that its very simplicity renders it attractive, and that it is one of the questions of general pathology which is most deserving of elucidation. Indeed, principally with the view of drawing the attention of British pathologists to the consideration of this asserted pathological law, do we now so pointedly allude to it, wishing to stimulate our readers to inquiry, and taking the present opportunity of mentioning that we shall be happy to give publicity to any researches which may be made in this direction. The marshy districts of Lincolnshire, and of other parts of England in which intermittent fever reigns supreme, must afford as good opportunities of observing the antagonism of miasmatic cachexia and phthisis, as those of France. On the other hand, our large manufacturing towns, in which both chlorosis and phthisis are so extremely prevalent, must present excellent opportunities for observing their connexion one with the other.

The influence of preparations of iron over tuberculization is a question which also deserves to be seriously investigated. The opinion of M. Trousseau is certainly opposed to the opinions and experience of many practitioners, who have been in the habit of administering iron in the incipient stages of tuberculization, with, we think, marked benefit. In works on pathology, experiments are mentioned in which rabbits and other animals fed on moist unwholesome food mixed with iron, and kept in damp, dark localities, did not become tuberculous; whilst others, fed and kept in the same way, but without iron, rapidly fell victims to tubercularization. These experiments might be easily repeated, especially by practitioners living in the country.—*London Lancet*.

Some hints on the most efficient modes of administering Medicines. By a practitioner of half a century.—Many of the most important discoveries and improvements in medical science are rendered comparatively useless, in consequence of being unskilfully applied to actual practice. In no department of knowledge is this defect more conspicuous than in therapeutics. Man (and I believe the same remark applies to all created beings) is born with a kind of instinctive antipathy to physic, which antipathy he retains from the cradle to the grave. Look at the ingenious spoons that have been invented to

force physic down the throats of infants! Observe the mantle-pieces of sick chambers, and count how many phials are either uncorked, or only half emptied! How great a proportion of mankind hate the very name of physic! If the stomach is apt to turn at the thought of medicine, when we are in health, how much less capable is it to bear nauseous drugs in the various forms of disease, nine-tenths of which affect the stomach sympathetically with squeamishness, nausea, and aversion to food as well as physic? The evil consequences of nauseous forms of medicine being used in sickness, are great beyond all calculation or belief. One result is, that medicine is not taken in sufficient quantity, sufficiently often, or for a proper length of time.

What practitioner will fail to recognize the following picture of almost daily occurrence? A medical man is in anxious attendance on a patient—say a lady after confinement, and threatened with some grave malady, peritonitis, for instance—he prescribes what he conceives to be active and efficient remedies for the night, and gives strict injunctions to the nurse. In the morning, when he calls, he meets the nurse on the stairs. Have you given your mistress the medicines punctually? Most punctually, sir. Well, what has been the effect? “Brought everything up again sir.” What, all? “Every drop, sir—and I thought she would have brought her very heart up with it.” After such intelligence, the feelings of the doctor, on entering the chamber, are not particularly enviable. Now all this is more frequently owing to the form than the substance of the medicine exhibited.

In chronic diseases, where the remedial process is necessarily chronic also, we are daily baffled by the repugnance, nay, the resistance of the patient to a protracted course of physic. Yet it might very generally be so contrived, that the patient would desire rather than loathe his medicines.

I am aware that in some acute diseases, the state of nausea itself is desirable and salutary. But it is not the mere nausea or sickness which lessens the velocity of the circulation, opens the secretory vessels, and checks inflammation. These remedial processes depend much upon the *quantity* of medicine, say antimony, which the patient can bear in order to induce them. Thus double or triple the quantity of tartrate of antimony will be borne, before sickness is induced, if given in an effervescing draught, as compared with the same medicine given in plain water. And the remedial effects will be in proportion. This is a truth that should ever be held in mind, and the principle was well understood by Rasori, Thomasini, and others. The contra-stimulant effects of antimony are trifling during the nausea and sickness at the beginning. It is when the *tolerance* is acquired that the inflammation or high fever is controlled.

But there is a large class of diseases in which the stomach is morbidly irritable, and where nauseating medicines are positively injurious. Putting aside the multitudinous forms of dyspepsia, we have

affections of the uterus, the kidney, the liver, the pancreas, &c., where the stomach is prone to disordered function, and where it is of the greatest consequence to exhibit medicines in forms that will tranquilize rather than nauseate the stomach. Diseases and disorders of the kidney are now acknowledged to be much more frequent than they were formerly suspected to be—and these are very generally attended with gastric irritability. In these it is of great importance not to ruffle the stomach by medicines. In affections of the brain, now so exceedingly common in consequence of the advanced stage of civilization, and the operation of various perturbing moral causes, the stomach is often the organ most conspicuously deranged—and we are not seldom foiled in the exhibition and perseverance of proper remedies, from the sympathetic disorder of stomach.

Nine-tenths of the cures that are said to be performed by homoeopathy, result from the spare diet and the nullity, as it were, of the medicine employed. Of all the medicines that are prescribed by the physician, the class of salines are the most generally beneficial, as opening the secretory organs, as the skin, the liver, the kidneys, &c., besides improving the state of the blood, and restraining febrile action in the constitution. These, when exhibited in an effervescent state, are far more palatable, as well as more efficacious, than when given in a plain form.

Tonics, on which the routine practitioner so much relies, and which he exhibits with no sparing hand, are more frequently injurious than beneficial. They give a feeling of tone for a time; but they lock up the secretions, increase too much the appetite, and lay the foundation for future states of plethora, congestion, or indigestion.

Now saline effervescents may be made the vehicle for many of the most powerful tonics, and indeed the most potent medicines which we possess. The citrate of iron, colchicum, antimony, arsenic, quinine, iodine, &c., &c., may all be exhibited in a form that increases their remedial efficacy, and lessens their tendency to nauseate the stomach.—*Bulletin of Medical Science.*

Ox-gall in Constipation.—Dr. R. H. Allnat, in a paper in the *Lancet*, (June 7th, 1845,) relates several cases, illustrative of the good effects of inspissated ox-gall in the cure of habitual constipation. In a subsequent No. of the same Journal, (July 12th,) he recommends that the ox-gall should be prepared in a water-bath, the gall being frequently stirred, to produce a perfectly homogeneous extract. The addition of a small quantity of magnesia will, he says, expedite the process. He gives it in doses of five grains made into pills, three times daily. He administers it also in some cases, in the form of enema.—*American Journal.*

Treatment of Infantile Gastric Fever. By GOLDING BIRD, A. M., M. D.—The origin of gastric fever occurring among children is usually to be ascribed either to unhealthy ingesta or depraved secre-

tions. The pulv. sodæ comp.* of Guy's Pharmacopœia, in doses of three to eight grains at night, and a full dose of the pulv. rhœi salin.† every morning for a week or so, will in most cases be found very successful treatment. To the latter compound, so well known to the profession for its almost specific power in these affections, Dr. Fordyce accorded this elaborate praise—"Had I been more ambitious of dying a rich man, than of living a useful member of society, the powers of our anti-hectic powder in curing, as if by miracle, the hectic fever and the swelled bellies of children in this town would have remained a secret while I lived."—*Guy's Hospital Reports*.—*Braithwaite's Retrospect*.

Sulphate of Quinine not absorbed when applied Endermically. By M. MARTIN SOLON. (*Bulletin de Thérapeutique*, Dec. 1844.)—Many medicines, when applied to the skin either whole or deprived of its cuticle, act energetically on the economy, and may be detected in the secretions, thus showing they have been absorbed. Sulphate of quinine, when given internally in the dose of one grain, may easily be detected in the urine by means of the ordinary tests, as iodide of potassium, &c. Martin-Solon, however, has made many experiments on twenty individuals affected with various maladies, relative to this medicine being absorbed when applied to the skin, and in no case has he succeeded in detecting the slightest traces of the medicine in the urine. The sulphate of quinine was applied by friction to the sound skin, and to that denuded of cuticle, in baths and by means of ointments. The effect was null in all.

Report relative to Vaccination.—The French Academy of Medicine offered a prize of 10,000 francs for the best report upon the following questions, viz:

1st. Is the preservative power of the vaccine permanent, or is it merely temporary? In the latter case, the time during which vaccination will protect from small-pox, is to be determined by precise observation, and well authenticated facts.

2d. Does the cow-pox afford a more certain or permanent preservative effect, than the vaccine which has been employed in a number of successive vaccinations, more or less considerable? Does the intensity of the local phenomena of vaccination, bear any relation to its preservative effects?

3d. In case the preservative property of the vaccine becomes enfeebled by time, must it be renewed, and by what means?

4th. Is it necessary to vaccinate the same person several times,

* Sodæ Carbonatis exsiccatae 3v. Hydrargyri Chloridi 5i. Pulv. Cretae compositi 3x. m.

† Rhœi radices pulv. 5i. Potassæ Sulphatis 5ij. m.

and if so, after the lapse of how many years, should a new vaccination be made?

The questions were proposed by the Academy for 1842, but in view of the great number (35) of works which were sent to the *concours*, a decision upon their respective merits was postponed until 1843—Even up to that time the whole of the articles had not been examined, and a further postponement of the report of the commission was decreed.

In April 1845, this commission, consisting of M. M. Magendie, Breschet, Duméril, Roux, and Serres, made a report, which from its length we cannot give entire, we will therefore only extract their conclusions.

1st. The preservative power of the vaccine is permanent in the greater number of vaccinated subjects, and temporary in a small number. Even among the latter, it affords an almost entire protection up to adolescence.

2d. Variola rarely attacks vaccinated persons before the age of ten or twelve years—It is from this period up to the thirty-fifth year that they are principally exposed to its attacks.

3d. Besides its preservative property, the vaccine effects a modification of the organization, which renders variola more mild, and abridges its duration.

4th. The cow-pox gives to the local phenomena of vaccination a marked intensity, and its effects are more certain than when old vaccine matter has been employed—But after some years of transmission through the human subject, this local intensity disappears.

5th. The preservative property of the vaccine does not appear to be dependent upon the intensity of the local symptoms; nevertheless to preserve its properties, it is prudent to renew the vaccine as often as practicable.

6th. Among the means proposed for its renewal, the only one in which confidence can be reposed, consists in procuring the matter from its original source.

7th. Re-vaccination is the only mode by which we can distinguish those vaccinated subjects who are fully protected from variola, from those who are only partially so.

8th. The proof afforded by re-vaccination, does not furnish certain evidence, that the vaccinated persons in whom it succeeds, would have contracted variola; but it merely offers a probability that such would be the case, as it is only among such subjects, that the disease is developed.

9th. In ordinary times re-vaccination should be practised about the fourteenth year; during an epidemic, it is prudent to renew it at an earlier age.—*Jour. des Connaissances Méd. and Chir.*

MEDICAL INTELLIGENCE.

Medical College of Georgia.—The annual course of Lectures in this Institution, began on Monday the 10th November. The Introductory Lecture was delivered by Prof. Ford, to a large audience of students and citizens. The class now in attendance, both in numbers and general intelligence, is not surpassed by any which has preceded it.

METEOROLOGICAL OBSERVATIONS, for October, 1845, at Augusta, Ga.
Latitude 33° 27' north—Longitude 4° 32' west Wash. Altitude above tide 152 feet.

	THERMOMETER.		BAROMETER.		WIND.	REMARKS.
	Sun rise.	3, P. M.	Sun rise.	3, P. M.		
1	60	78	29 71-100	29 74-100	w.	Fair.
2	48	73	" 81-100	" 87-100	N. E.	Fair.
3	60	69	" 90-100	" 87-100	N. E.	Cloudy—sprinkle. [night.
4	61	64	" 84-100	" 72-100	N. E.	Rain from 4, A. M. till mid-
5	64	70	" 64-100	" 70-100	N. W.	Flying clouds—fair.
6	49	71	" 81-100	" 83-100	N. E.	Fair. [rain.
7	58	73	" 87-100	" 86-100	N. E.	Cloudy, sprinkle—11, P. M.
8	68	80	" 84-100	" 76-100	S. E.	Cl'dy—spr.—9, P. M. r. blow.
9	70	79	" 84-100	" 73-100	S.	Cloudy—sprinkle.
10	71	67	" 68-100	" 59-100	N. E.	Rain all day, and at night.
11	64	65	" 55-100	" 37-100	N. E.	Rain all day, and at night.
12	46	59	" 35-100	" 56-100	N. W.	Fair—breeze.
13	41	64	" 91-100	" 98-100	N. W.	Fair.
14	43	68	30 3-100	30 3-100	N. W.	Fair.
15	45	68	29 98-100	29 98-100	N.	Fair—some clouds.
16	46	61	30 14-100	30 10-100	N.	Fair.
17	40	66	30 6-100	30 6-100	N. E.	Fair.
18	46	72	30 4-100	30	E.	Fair—some clouds.
19	56	71	30	29 95-100	N. E.	Cloudy.
20	62	60	29 85-100	29 77-100	N. E.	Rain all day.
21	59	61	29 76-100	29 82-100	N. E.	Cloudy—breeze. [night.
22	40	55	30 5-100	30 3-100	N. E.	Fair—some cl'ds—blow last
23	41	62	30 6-100	30 4-100	N. E.	Fair.
24	42	65	30 4-100	30	N.	Fair.
25	46	66	30	30	E.	Fair.
26	42	70	30 7-100	30 7-100	N.	Fair.
27	42	69	30 7-100	30 7-100	N.	Fair.
28	42	64	30 7-100	30 3-100	E.	Cloudy.
29	42	71	30	30	w.	Fair.
30	46	72	29 95-100	29 90-100	w.	Fair.
31	48	74	29 92-100	29 90-100	w.	Flying clouds.

18 Fair days. Quantity of Rain, 7 inches.

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